

Erythema ab igne: A case report

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Introduction

Erythema ab igne, also known as toasted skin syndrome, ephelis ignealis, erythema ab calore, and fire stains, is characterized by reticular, erythematous to violaceous colored patches on exposure sites due to heat. The condition often occurs secondary to occupational exposure or the use of heating pads. The back and thighs are the most commonly affected sites, mainly due to contact with heating pads or placing laptops directly over the skin. This condition can mimic other dermatological conditions like livedo reticularis, livedo racemosa, cutis marmorata, and cutis marmorata telangiectasia⁽¹⁾. Rarely, skin cancers (nonmelanoma) may also develop within sites of erythema ab igne^(2,3). The present case report aims to discuss erythema ab igne related to the prolonged use of heating pads.

Case report

A 58-year-old male presented with an asymptomatic pigmented lesion over the lower back since 4-5 months. He also complained of chronic lower backache, for which he took multiple physiotherapy sessions. During these sessions, heating pads were applied over the lower back region. After a few sessions, these erythematous to violaceous lesions started appearing and gradually expanded to involve the complete lower back area.

The patient did not take any treatment for skin lesions. There was no history of any co-morbidity, no history of similar complaints in the past, no history of similar complaints in family members, and no history of any connective tissue disorders.

On cutaneous examination, hyperpigmented macules coalescing together in a reticulate pattern were observed over the back (Figure 1). There were no lesions elsewhere over the body. Dermoscopy was not done. Also, the patient refused skin biopsy. Hence, the disease was diagnosed clinically.

The patient was counseled and informed about the causative factors and was advised to avoid the use of heating pads. The skin lesion improved after discontinuation of a heating pad.

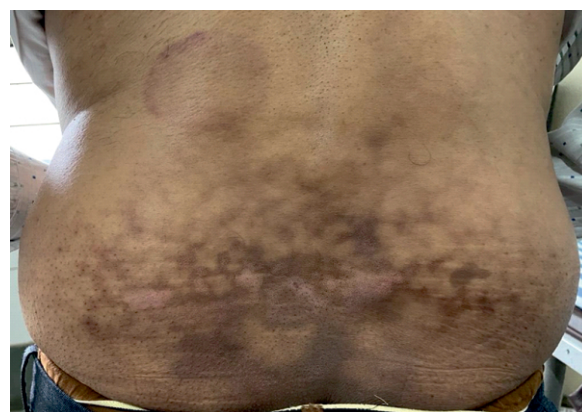


Figure 1: Reticulate hyperpigmentation over the lower back

Discussion

Erythema ab igne initially appears as transient, blanchable erythema, which gradually progresses to form a reticulate hyperpigmentation pattern with epidermal thinning (atrophy) and telangiectasia due to prolonged heat exposure⁽⁴⁾. Hence, it starts as a reversible livedo reticularis and, with prolonged heat exposure, develops into fixed hyperpigmentation⁽⁵⁾. Previously erythema ab igne was associated with exposure to open fires or burning stoves. However, nowadays, it is more related to newer heat sources like heating pads, heated car seats, space heaters, and laptop computers⁽⁴⁾. Usually, in most cases, this long-term heat exposure temperature is not sufficient to cause burns (37°F to 113°F)⁽⁶⁾. Due to the asymptomatic nature of this condition and the sites involved, such as the back, the development of erythema ab igne may go unnoticed by the patient.

Histopathological examination shows numerous non-specific findings like epidermal atrophy, telangiectasias, keratinocyte atypia, and hemosiderin deposition. Hence skin biopsy helps exclude other differential diagnoses like cutaneous vasculitis. Moreover, squamous cell carcinoma and Merkel cell carcinoma are common cancers that can arise within lesions of erythema ab igne^(2,3). So, if lesions of

erythema ab igne continue to evolve or ulcerate, a biopsy is strongly warranted. Prevention can be done through educating and creating awareness about the condition. Early diagnosis and elimination of the contributing heat source are also important aspects. While recommending the heating pads use, physicians should be aware of its related adverse manifestations. Hence physicians should counsel the patients about the safe use of using heating pads. It should be informed to the patients that for therapeutic purposes, the use of heating pads should not exceed more than half an hour⁽⁷⁾.

Moreover, it should also be communicated that the heating pad should not be placed underneath a body part but on the top. This ensures that less heat gets trapped, and the risk for development of erythema ab igne is reduced. Topical 5-fluorouracil, tretinoin, and hydroquinone have shown promising results in persistent hyperpigmentation and epithelial atypia^(7,8). Also, Q-Switched Neodymium Doped Yttrium Aluminium Garnet (Q switched Nd:YAG) laser therapy with a low fluence of 1.8 J/cm² has been tried and has shown good response^(7,8).

Conclusion

Erythema ab igne is preventable, and physicians should offer education about the safe use of heating devices to the patients.

Ethical consideration

Informed consent was taken from the patient.

Source of support: Nil

Conflict of interest: Nil

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