



A Reticulate Hyperpigmented Abdominal Patch Associated with Chronic Abdominal Pain

ABSTRACT

Erythema ab igne is a dermatologic phenomenon associated with chronic exposure of the skin to a heat source. It begins as transient erythema, which evolves into semi-permanent, reticulate hyperpigmentation after repeated exposure. The diagnosis of erythema ab igne can be made based on the history and clinical presentation, and rarely requires biopsy. Usually, no specific treatment is indicated as the lesion self-resolves with removal of the heat source.

KEYWORDS: Erythema ab igne, hyperpigmentation, reticulate, thermal injury



Case presentation

A 13-year-old girl presented with a 3-month history of a reticulate hyperpigmented patch over the lower abdomen. Her past medical history was significant for recurrent abdominal pain, Ehlers-Danlos syndrome, a mild learning disability, and multiple allergies. On physical examination, she had a reticulate, hyperpigmented patch distributed diffusely over the lower abdomen (Figure 1). The remainder of her exam was unremarkable. Upon questioning, it was revealed that the patient had been applying a hot water bottle to the lower abdomen for the last 4 months to help relieve the

Figure 1: Reticulate hyperpigmentation over the lower abdomen associated with a history of prolonged exposure to a hot water bottle.



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discomfort associated with the abdominal pain. This history led to the diagnosis.

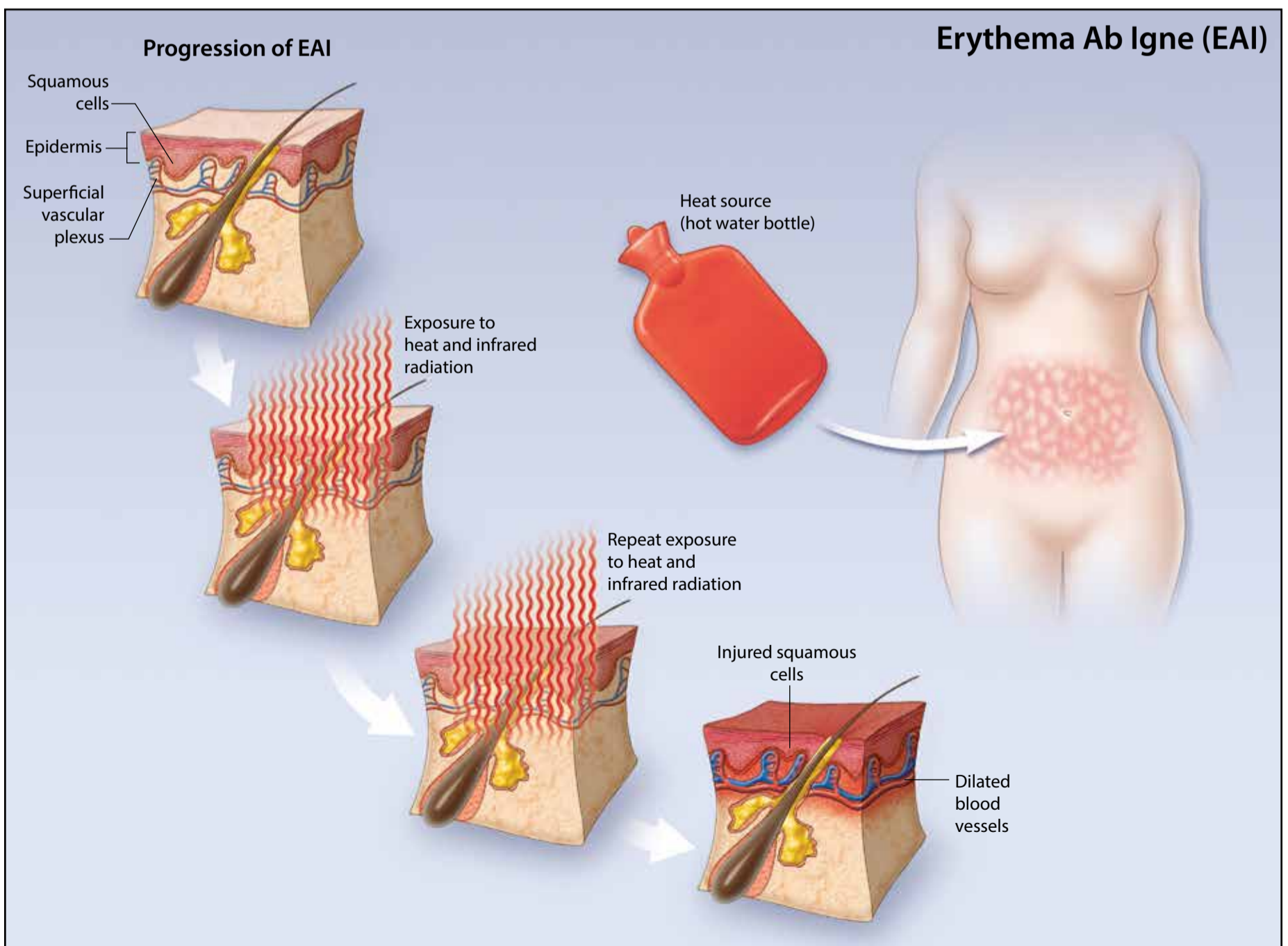
Discussion:

Based on the history of chronic heat exposure and the clinical presentation, the diagnosis of erythema ab igne was made. Erythema ab igne (EAI) typically presents as an asymptomatic, hyperpigmented, net-like eruption that develops after prolonged heat exposure to temperatures of 43-47°C. Lesions are erythematous, blanchable and transient at first, but become

hyperpigmented and semi-permanent with continued exposure to the heat source.

The pathogenesis is thought to be secondary to epidermal damage along superficial blood vessels due to infrared radiation, causing deposition of hemosiderin in a reticulate net-like distribution.

The distribution of the eruption corresponds to the area exposed to heat source. Common culprits include heating pads, heated blankets, space heaters, steam radiators, and car engines. A recent variant, laptop computer-induced





SUMMARY OF KEY POINTS

Erythema ab igne may present as a transient erythematous eruption, or as a reticulate hyperpigmentation.

Erythema ab igne is a clinical diagnosis which rarely requires biopsy confirmation.

Direct questioning about heat sources, such as prolonged laptop computer use, aids the diagnosis.

Treatment consists of patient education and removal of the heat source.

EAI, affects the anterior upper leg in patients who repeatedly rest their laptops on their thighs.

Although clinically recognizable, EAI can be mistaken for livedo reticularis, livedoid vasculitis, cutis marmorata telangiectatica congenita, a reticulate port-wine stain and poikiloderma.

EAI is a clinical diagnosis. In cases requiring biopsy, histologic examination reveals vasodilation, epidermal atrophy, hyperkeratosis, keratinocyte necrosis, and deposition of melanin and hemosiderin. Cellular changes similar to those seen in actinic keratosis may occur.

With removal of the heat source, erythema ab igne can be expected to fade spontaneously over months to years. Treatment is not required, but the use of lasers and 5-fluorouracil have been described.¹

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References:

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CLINICAL PEARLS

1. Erythema ab igne is a recognizable condition associated with chronic exposure to heat sources such as heating pads, hot water bottles, electric blankets, space heaters and laptop computers.
2. The differential diagnosis for erythema ab igne includes livedo reticularis, livedoid vasculitis, cutis marmorata telangiectatica congenita, a reticulate port-wine stain and poikiloderma.
3. The most important treatment for erythema ab igne is recognition and removal of the source of infrared radiation.

