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Answer: Erythema ab igne of the abdominal wall from chronic use of hot water bottle

Erythema ab igne is derived from the Latin meaning "redness from fire." It arises as a result of repetitive and cumulative exposure of the skin to heat or infrared radiation that is under the threshold of a thermal burn.¹⁻³ The site, shape, and size of the lesion usually corresponds to the heat source being applied.³

Erythema ab igne typically occurs on the legs of people who stand or sit next to coal stoves or fires, and on the face and forearms of cooks and bakers.¹ It also commonly affects those who use a heat source, including heating pads, hot water bottles, electric blankets, and heated recliners, for chronic pain relief.² A more recent manifestation of erythema ab igne has been observed on the anterior thighs of people who use their laptops for prolonged hours while they are propped on the legs.

Although some patients may complain of mild pruritus and a burning sensation, most cases of erythema ab igne are asymptomatic.¹ The lesion may go unnoticed until changes in skin pigmentation start to occur. Initially, a transient, blanchable erythema with a reticulated pattern develops.² As the heat exposure becomes more prolonged, this provokes the erythema to evolve into a fixed, reticulated, unblanchable hyperpigmentation.³ Histologically, erythema ab igne is charac-

terised by epidermal and dermal atrophy, increased melanin and haemosiderin deposition, and squamous atypia. Other findings include hyperkeratosis, telangiectasia, and subepidermal bullae.¹ These changes are similar to those seen with chronic ultraviolet radiation exposure.

The mainstay of treatment lies in reducing or removing the offending heat source early in the disease process to facilitate reversal of the skin hyperpigmentation and achieve complete resolution, especially in patients who have only been exposed for a short duration.^{1, 2} However resolution is unlikely in advanced cases with abnormal pigmentation and skin atrophy. In this group, topical treatment with tretinoin and 5-fluorouracil may be helpful.¹

Very rarely, squamous cell carcinoma and Merkel cell carcinoma can develop in the areas of erythema ab igne after decades of heat exposure.¹ Due to this uncommon yet malignant sequelae, periodic surveillance of erythema ab igne may be necessary to identify any suspicious lesions, such as nodules or ulcers, and perform biopsy as appropriate.

Patient with abdominal erythema ab igne indicates that the patient has chronic pain and needs to be evaluated. Underlying neoplasms such as pancreatic cancer need to be excluded. The underlying cause need to be addressed and appropriately treated and pain control optimised.

REFERENCES

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 - 3: Naldi L, Berni A, Pimpinelli N, Poggesi L. Erythema ab igne. *Intern Emerg Med.* 2011; 6:175-6.
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