Introduction

Back pain is one of the most common presenting complaints seen by providers across the spectrum of medical care, and has a wide range of causes. Many patients use multiple modalities to achieve adequate pain relief, including self-administered, over-the-counter therapies.

Heating pads or heat wraps have been widely used as a remedy for back pain, and have been shown to be as efficacious as ibuprofen and acetaminophen in acute, non-specific, low back pain. Heat therapy is generally considered benign. However, even benign treatments can sometimes lead to unforeseen consequences.

Learning Objectives

- Recognize the risk factors, typical presentation and appearance of erythema ab igne.
- Understand the management and implications of this condition.

Clinical Presentation

A 49-year-old man with recently diagnosed small cell lung cancer complicated by painful metastases to the spine presented to the Emergency Room for intractable nausea and vomiting. On examination, he was found to have a non-painful, hyperpigmented, reticular rash on the left lumbar region of his back (Figures 1 and 2).

Upon further questioning, the patient mentioned using a heating pad on that location to alleviate back pain and approximately one month earlier he had fallen asleep with the pad on his skin. His wife noted the rash the next day. He switched to a different brand of heating pad and continued to use this infrequently up until the time of presentation. There was no associated pain, itching or burning.

Discussion

Diagnosis

As in our case, erythema ab igne or “redness from fire,” usually appears as a reticulated, erythematous, hyperpigmented eruption that can develop after heat therapy is undertaken for pain and inflammation. This condition has been reported in elderly individuals sitting too close to the fire and industrial workers who are heavily exposed to heat (e.g., bakers, silversmiths). Erythema ab igne is also known as hot water bottle rash, fire stains, laptop thigh, and toasted skin syndrome. While there may be associated symptoms of pruritus or burning, the majority of patients are asymptomatic. Diagnosis is usually clinical, based on the appearance of the eruption and a corresponding history of local heat exposure. The skin findings may be confused with livedo reticularis and cutis marmorata, which in contrast, can both be caused by exposure to cold.

Pathophysiology

Erythema ab igne is considered a type of a thermal burn injury akin to infrared radiation. Similar to actinic keratosis, neutrophil-derived proteolytic enzymes may be responsible for the histopathologic changes which include squamous atypia in the epidermis.

Management

Removal of the inciting cause is the mainstay of therapy. Following removal of the stimulus, the discolouration gradually lightens after several months to years, although long standing pigmentations have been reported. If the rash is severe or becomes ulcerated, there is increased risk for squamous cell carcinoma and a biopsy may be indicated if the lesion does not heal.

Follow-up:

The patient was instructed to stop using the heating pad on this location. No rash was noted on our patient’s skin at a subsequent visit two months later.

References