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**Letter**

**Erythema ab igne: evolving technology, evolving presentation**

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**Abstract**

We present a case of a 49-year-old woman with erythema ab igne on her posterior thighs owing to 2-4 hours per day of seat heater use in her car. Erythema ab igne is caused by prolonged exposure to a heat source. It used to be caused mainly by wood stoves used to heat homes. Erythema ab igne is now more often related to other heat sources, including heating pads, laptop computers, and car seat heaters, as in our case. As technology changes, so does the presentation of skin conditions that are related to technology.

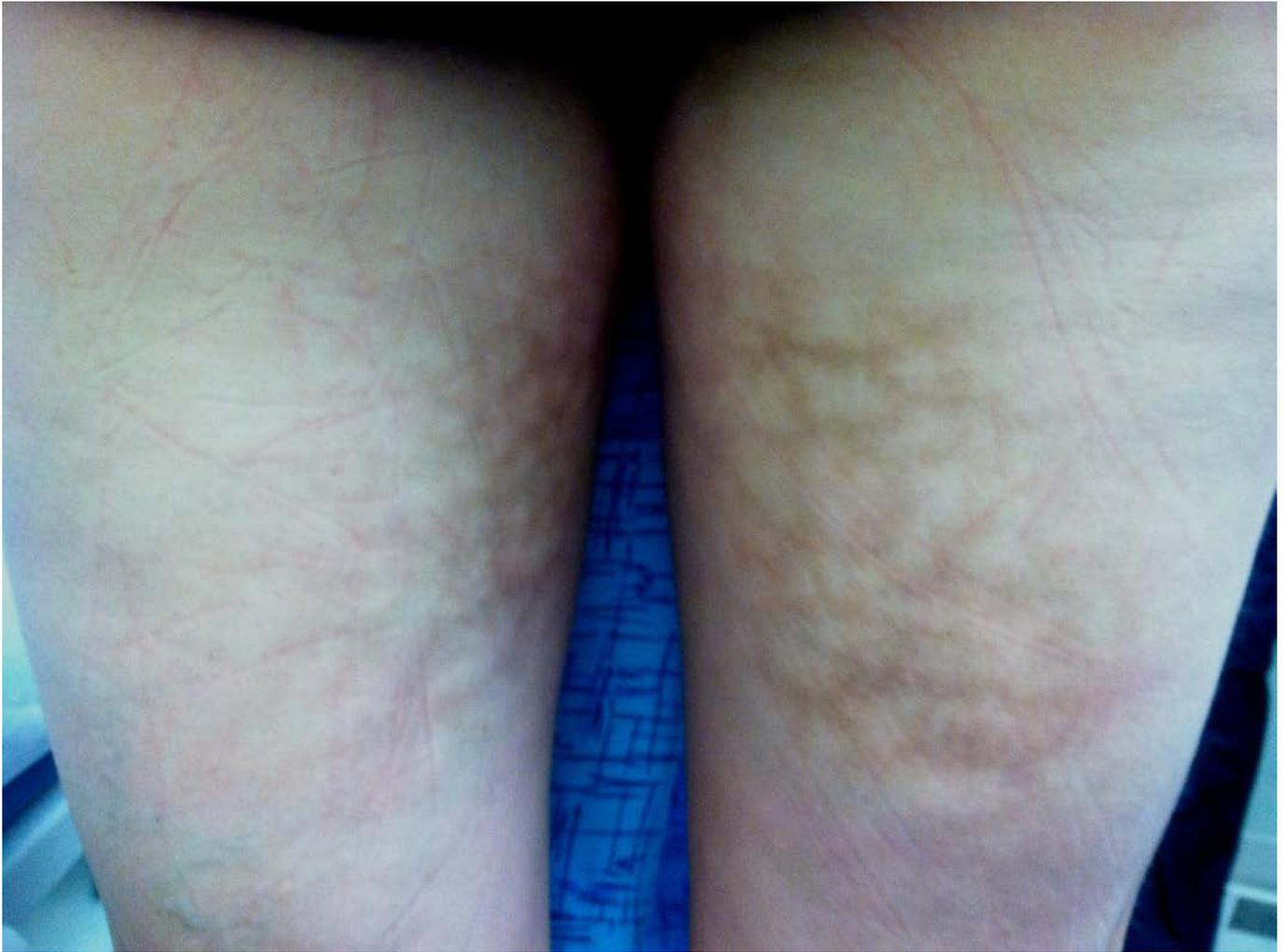
**Keywords: erythema ab igne**

**Introduction**

Erythema ab igne, commonly known as toasted skin syndrome or fire stains, is caused by prolonged exposure to a heat source resulting in reticular, erythematous, hyperpigmented patches [1]. The temperature of the heat source is typically below 45°C (113°F) [1]. The exact mechanism in which heat causes erythema ab igne is unknown, but the pattern appreciated on the skin corresponds with the dermal venous plexus [1].

**Case synopsis**

A healthy 49-year-old woman presented to the dermatology clinic with a two-year history of asymptomatic reticular erythema on the back of her thighs. She reported that she consistently used her car's heated seats while driving 2-4 hours per day for several years. She denied using any treatment on the affected area. Physical exam revealed reticular, erythematous patches on the posterior upper legs and buttocks region (Figure 1). No treatment was given and with cessation of the car's seat heater, the patient's cutaneous changes slowly faded with no evidence of disease five months after initial presentation.



**Figure 1.** Reticular erythema on the posterior thigh

## Discussion

The clinical presentation of erythema ab igne is typically erythema that progresses to a reticular pattern of hyperpigmentation and hypopigmentation. Infrequently, subepidermal bullae, diffuse hyperkeratosis, and ulceration can occur [2]. In rare cases, a malignancy develops in the area affected by erythema ab igne, including squamous cell carcinoma in situ, squamous cell carcinoma, and Merkel cell carcinoma [1].

In the past, the main causative agent of erythema ab igne was a wood stove used to heat the home [1]. Erythema ab igne would typically present on the anterior shins because people would warm themselves in front of the stove. Since the advent of central heating, this presentation has become much less common. Erythema ab igne of the lower back related to the use of heating pads became the most common presentation. More recently, other presentations have been reported, including erythema ab igne of the thighs and the abdomen with exposure to laptop computers [2,3,4].

Car seat heaters are a potential source of burns, especially for paraplegics, quadriplegics, and diabetics who have decreased sensation. We identified two other cases of erythema ab igne reported owing to car seat heaters [5,6,7,8].

Dermatologists will likely benefit from having a high index of suspicion regarding various technological devices as a cause of dermatology problems. As technology evolves and becomes more ingrained in our everyday lives, our skin is necessarily exposed to more and different devices. Currently, modern gadgets cause a variety of dermatologic conditions, including erythema ab igne, contact dermatitis, allergic contact sensitivities, and repetitive strain or traumatic injury [9]. Machines implicated in these diagnoses includes laptop computers, video games, cell phones, and other technological accessories, including personal heaters. For most of the dermatologic conditions attributed to modern technology, the treatment is immediate and long-term cessation of the exposure. In some cases, such as laptop-induced erythema ab igne, there are practical solutions such as barrier devices that stop the transfer of heat [10]. Cessation of the causative agent may become a problem as technology becomes an increasingly vital

part of our daily activities. Furthermore, as technology evolves and varies across countries, the presentations of cutaneous manifestations related to the use of new forms of gadgets will also change. Being cognizant of modern technological advances and how they are used in specific countries may help diagnose the diseases that can accompany them.

## References

1. Cole MB, Smith ML. Environment and sports-related skin diseases. In: Bologna J, Jorizzo JL, Rapini RP, eds. *Dermatology*. Vol 1. London, England: Mosby;2012:1489-1491
2. Huynh N, Sarma D, Huerter C. Erythema ab igne: a case report and review of the literature. *Cutis* 2011;88(6):290-292. [PMID: 22372168]
3. Chaterjee S. Erythema ab igne from prolonged use of a heating pad. *Mayo Clin Proc* 2005;80(11):1500. [PMID: 16295029]
4. Riaha RR, Cohen PR. Laptop-induced erythema ab igne: Report and review of the literature. *Dermatol Online J* 2012;18(6):5. [PMID: 22747929]
5. Tan S, Bertucci V. Erythema ab igne: an old condition made new again. *CMAJ* 2000;162(1):77-78. [PMID: 11216204]
6. Rakowski KRM, Sivathasan N, Sivathasan N. Pain in your buttocks? Check your heated car seat isn't burning you. *Spinal Cord* 2011;49(5):672. [PMID: 20838406]
7. Adams BB. Heated car seat-induced erythema ab igne. *Arch Dermatol* 2012;148(2):265-266. [PMID: 22351838]
8. Brodell D, Mostow EN. Automobile seat heater-induced erythema ab igne. *Arch Dermatol* 2010;148(2):264-265. [PMID: 22351837]
9. Li K, Barankin B. Cutaneous manifestations of modern technology use. *J Cutan Med Surg* 2011;15(6):347-353. [PMID: 22202511]
10. Riahi RR, Cohen PR. Practical solutions to prevent laptop computer-induced erythema ab igne. *Int J Dermatol* 2014 Jun; [Epub ahead of print]. [PMID: 24961574]