

## QUIZ SECTION

### A Reddish Brown Reticulated Hyperpigmented Erythema on the Abdomen of a Girl: A Quiz

Adis Dizdarevic, Omar A. Karim and Anette Bygum

Department of Dermatology and Allergy Centre, Odense University Hospital, DK-5000 Odense C, Denmark. E-mail: anette.bygum@rsyd.dk

A 14-year-old girl was referred to the department of dermatology due to a newly acquired asymptomatic reticulated violaceous rash on the abdomen (Fig. 1). At the central part of the lesion, slightly keratotic skin was seen. The rash developed a few months after being investigated at the Department of Pediatrics for an unexplained weight loss of 7 kg to a BMI of 11.6. The examinations did not reveal more pathologic findings. The patient also consulted a child psychiatrist because of a suspicion of an eating disorder. This theory was subsequently rejected.

Finally, a suspicion of livedo reticularis or livedo racemosa was raised and an underlying systemic disorder was considered.

*What is your diagnosis?* See next page for answer.



Fig. 1. A 14-year-old girl with an asymptomatic reticulated violaceous rash. At the central part of the lesion, slightly keratotic and scaly skin can be seen.

doi: 10.2340/00015555-1722

## ANSWERS TO QUIZ

**A Reddish Brown Reticulated Hyperpigmented Erythema on the Abdomen of a 14-year-old Girl: A Comment**

Acta Derm Venereol 2014; 94: 365–366

**Diagnosis: Erythema ab igne, also known as toasted skin syndrome, caused by a heating pad on the abdomen.**

This 14-year-old girl was referred to the department of dermatology for further investigation of a newly acquired reticulated erythema. Prior to visiting the dermatologist, she had gone through a somatic and psychiatric diagnostic process due to an unexplained weight loss of 7 kg to a BMI of 11.6. The physical examination, blood samples and psychiatric evaluation revealed no other pathologic findings. This raised the question whether the patient could have livedo reticularis and a possible systemic disorder – maybe cutaneous polyarteritis nodosa.

The dermatologist expanded the anamnesis and realized that the patient had been using heating pads on her abdomen for a long period of time due to shivers and cold intolerance. This led to a prolonged exposure to heat.

The physical examination showed a livedo reticularis-like eruption with a reticulated reddish brown and violaceous erythema on the abdomen.

The exposure anamnesis and clinical presentation were so typical for erythema ab igne that no further investigations such as skin biopsy or blood tests were necessary.

Erythema ab igne is a classic skin condition caused by a persistent and repeated exposure to heat. The exposure is not warm enough to develop a burn damage, but enough to result in a vein dilatation and inflammation that eventually develops into hyperpigmented skin (1, 2). The typical appearance is a reticulated reddish brown hyperpigmentation in the exposed skin areas. It usually begins as a reticulated erythema but hyperpigmentation often develops after repeated exposure to heat. Erythema

ab igne often resembles livedo reticularis which has a purple blue discolouration of the skin in a mesh shaped pattern. Unlike erythema ab igne, livedo reticularis does not present with hyperpigmentation (3). When erythema ab igne is suspected, disease history should be focused on exposure to heat sources. Other examples of heat sources described in the literature are laptops, car heaters, fire places, heating blankets and work places with repeated exposures to infrared radiation (4–6).

Erythema ab igne is normally a benign asymptomatic condition, which is simply a cosmetic nuisance. However there are examples, where prolonged exposures have been complicated by malignant transformation (7).

The main treatment is elimination of contact with the heat source and the prognosis is very good. In most cases the skin lesions disappear altogether, though there is a risk of persistent post-inflammatory hyperpigmentation.

## REFERENCES

1. Kibbi AG, Tannous Z. Skin diseases caused by heat and cold. *Clin Dermatol* 1998; 16: 91–98.
2. Lin SJ, Hsu CJ, Chiu HC. Erythema ab igne caused by frequent hot bathing. *Acta Derm Venereol* 2002; 82: 478–479.
3. Riahi RR, Cohen PR, Robinson FW, Gray JM. Erythema ab igne mimicking livedo reticularis. *Int J Dermatol* 2010; 49: 1314–1317.
4. Bilic M, Adams BB. Erythema ab igne induced by a laptop computer. *J Am Acad Dermatol* 2004; 50: 973–974.
5. Helm TN, Spigel GT, Helm KF. Erythema ab igne caused by a car heater. *Cutis* 1997; 59: 81–82.
6. Dellavalle RP, Gillum P. Erythema ab igne following heating/cooling blanket use in the intensive care unit. *Cutis* 2000; 66: 136–138.
7. Arrington JH 3rd, Lockman DS. Thermal keratoses and squamous cell carcinoma in situ associated with erythema ab igne. *Arch Dermatol* 1979; 115: 1226–1228.