

Summer Thigh Eruption: An Unusual Case of Localized Dermatitis: A Quiz

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We report the case of a 25-year-old woman with no significant medical history except for exercise-induced asthma, who developed an unusual itchy skin rash after a tourist trip to Greece.

The day before the symptoms appeared, she had gone swimming in the sea in the afternoon after applying sunscreen on her body and then had a seafood dinner at a local restaurant, with no immediate skin or digestive reactions.

The following morning, she noticed the onset of fixed skin lesions located exclusively on the posterior thighs (Figs 1 and 2). They appeared as millimetric, erythematous, monomorphic, pruritic papules occasionally centred by vesicles, confluent into slightly infiltrated plaques. No other cutaneous sites were involved. Her general condition remained preserved, with no fever or associated systemic symptoms. The distribution of the lesions corresponded precisely to the area of contact with an old wooden

chair with a straw seat on which she had been sitting for about 1 h at the restaurant the previous day.

Symptomatic treatment with topical corticosteroids and antihistamines led to partial relief of the itching, with complete resolution of the lesions within a few days and no residual pigmentation or scarring.

Since this episode, there has been no recurrence for more than a year.

What is your diagnosis?

- 1: Skin reaction to jellyfish sting
 - 2: Allergic contact dermatitis to a component of the chair's wood
 - 3: *Pyemotes ventricosus* (wood mite) dermatitis due to the infestation of wood and/or straw of the chair
 - 4: Photoallergic contact dermatitis to sunscreen
- See next page for answer.



Fig. 1. Lesions featuring linear erythematous streaks suggestive of local lymphangitis.



Fig. 2. Erythematous papules on both posterior thighs, occasionally centred by vesicles.

ANSWERS TO QUIZ

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Diagnosis: Dermatitis due to *Pyemotes ventricosus* (wood mite) infestation

The fixed location of the itchy lesions, the absence of systemic symptoms and the environmental context – especially the prolonged contact with a potentially infested surface in a warm and humid setting – support the diagnosis of dermatitis caused by *Pyemotes ventricosus* (1–4). Commonly known as the “straw itch mite” or “grain itch mite”, this microscopic organism inhabits straw and wood, particularly untreated, aged or outdoor-exposed furniture. It can cause intensely itchy skin lesions just hours after contact. Typically, this mite parasitizes insects that infest materials such as seeds, grains, straw and wood (including certain beetle species), but it can occasionally bite humans when its usual hosts are unavailable. Its bite leads to characteristic skin lesions, which may appear linear or serpiginous, typically originating from the bite site. This pattern, known as the “comet sign”, is likely due to local lymphangitis (1–3). This sign is pathognomonic but reported only in about a quarter of cases (1, 2). The “comet sign” was visible on our patient’s right thigh at the beginning.

In summer, skin rashes localized to areas in contact with wood or straw can be confusing. They are often wrongly attributed to contact allergy or infection, while they may be due to *P. ventricosus*.

Although the strictly posterior location of the lesions and intense pruritus could initially suggest allergic contact dermatitis, several features argue against these diagnoses: the rapid onset of papules following prolonged contact with an old wooden and/or straw seat of a chair/armchair, the presence of the comet sign, the rapid and self-limited course with no residual skin changes, and sometimes skin eruption presenting in clusters/outbreaks make these differential diagnoses less likely. Similarly, a jellyfish sting would typically produce linear or streaked lesions on exposed areas, often associated with immediate burning and more widespread erythema.

In our patient, the strictly posterior location of the lesions – on the thighs and buttocks – matching the area in direct contact with the straw seat of the chair, supports this hypothesis. Although this distribution is rarely described in the literature, it reflects prolonged seated exposure to infested furniture.

Pyemotes-related eruptions typically appear during the summer months, especially in warm regions such as southeastern Europe, where the reopening of old houses or the use of infested wooden furniture increases the risk of exposure. Clusters of cases have been reported after contact with contaminated wood, straw, dust or agricultural materials such as straw mattresses, hay bales or stored grain.

According to the literature, these eruptions mainly affect adults, often young females or workers in agricultural settings. More rarely, children can be affected (4). Over the past century, epidemiological patterns have evolved: while early outbreaks were primarily associated with agricultural occupational exposure, more recent cases are increasingly reported among individuals spending summer holidays in rural areas. However, with the decline in certain practices in the 21st century in favour of more sustainable agriculture, this often underdiagnosed form of dermatitis could see a resurgence. Cutaneous signs are erythematous papules and vesicles. An atypical presentation of *P. ventricosus* with umbilicated, pseudopox-like lesions has also been documented (5). The lesions usually involve the trunk but also the limbs, less frequently the buttocks or thighs (1–3), but every part of the body can be affected. Systemic symptoms are rare, consisting of fever and vomiting. Most cases were diagnosed through clinical signs and the detection of the parasite in the environment, whereas in only one case, the parasite was microscopically observed after skin scraping (4).

These findings are consistent with the observations by Stingeni et al., who emphasized the importance of clinical context to avoid unnecessary tests (6).

Treatment could be symptomatic with topical corticosteroids and oral antihistamines as in our case, but the dermatitis is usually self-limiting and disappears within 1–3 weeks without treatment.

Although common and benign, this condition is still poorly known and often underdiagnosed. Proper clinical identification helps avoid excessive testing and effectively reassures the patient.

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