



Case illustrated

Trombiculiasis: The uninvited trekker

Claudio Guarneri^{a,*}, Giovanni Lanteri^b, Georgi Tchernev^c, Valentina Bevelacqua^d



^a Department of Clinical Experimental Medicine, Unit of Dermatology, at the University of Messina (Italy) C/O A.O.U. “G. Martino”, Via Consolare Valeria, 1, 98125 Messina, Italy

^b Department of Veterinarian Sciences at the Università of Messina (Italy), Viale Annunziata, 98168 Messina, Italy

^c Policlinic for Dermatology and Venereology, Saint Kliment Ohridski University, Medical Faculty, University Hospital Lozenetz, Koziak Street 1, 1407 Sofia, Bulgaria

^d Dermatology Operative Unit at AORNAS “G. Garibaldi”, Piazza Santa Maria del Gesù, 95100 Catania, Italy

ARTICLE INFO

Keywords:

Trombiculiasis

Dermatitis

Neotrombicula autumnalis

Human

A 38-year-old, otherwise healthy, Caucasian woman complained of itching skin eruption during a trekking in Aspromonte mountain in Calabria, Italy. On clinical examination, intensely pruritic, erythematous papules and nodules on abdomen, hips, buttocks and upper legs were noted, together with small hyperpigmented skin wounds along the waist area, probably due to scratching. (Fig. 1A and B). She recalled that her dog was also affected by intense itching after the trip, thus developing dermatitis of the abdomen, limbs, chin and ears. With the suspicion of a link between the human and the animal conditions, we obtained some specimens for microscopic examination revealing red-dish-orange mites that were identified as larvae of *Neotrombicula autumnalis* (Fig. 2).

Trombiculiasis is an epizoonosis that occurs worldwide, caused by various types of chiggers. Because of the favoring warm and humid environment, larvae are always present in tropical climates whereas they are abundant in the late summer and autumn in Europe and North America. The life cycle of *Neotrombicula autumnalis* starts from eggs deposited on the soil, then hatching in ten days as six-legged larvae; at this stage, they are able to climb onto warmblood-hosts, feeding for 2–10 days, and to inject lytic enzymes in the upper layers of the

skin using chelicerae. Larvae then return to the soil, developing into eight-legged nymphs and feeding on plant fluids or small insects [1].

Human infestation by chigger mites, although rarely reported in medical literature, has probably a not-negligible incidence. The reason of underreporting probably relies on the lack of attention to some neglected parasites, including life characteristics and way of transmission [1,2]. Formulations of combined permethrins and insect growth regulators achieved optimal responses in eradication of mites in animals. Natural permethrins have been used in humans in cases of massive infestation, together with treatment of symptoms and adequate disinfection of clothes [2].

Funding source

None.

Conflict of interest

None to be declared.

* Corresponding author.

E-mail addresses: cguarneri@unime.it (C. Guarneri), glanteri@unime.it (G. Lanteri), georgi_tchernev@yahoo.de (G. Tchernev), vbevelacqua@gmail.com (V. Bevelacqua).

<http://dx.doi.org/10.1016/j.idcr.2017.04.003>

Received 27 March 2017; Received in revised form 7 April 2017; Accepted 7 April 2017

2214-2509/ © 2017 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

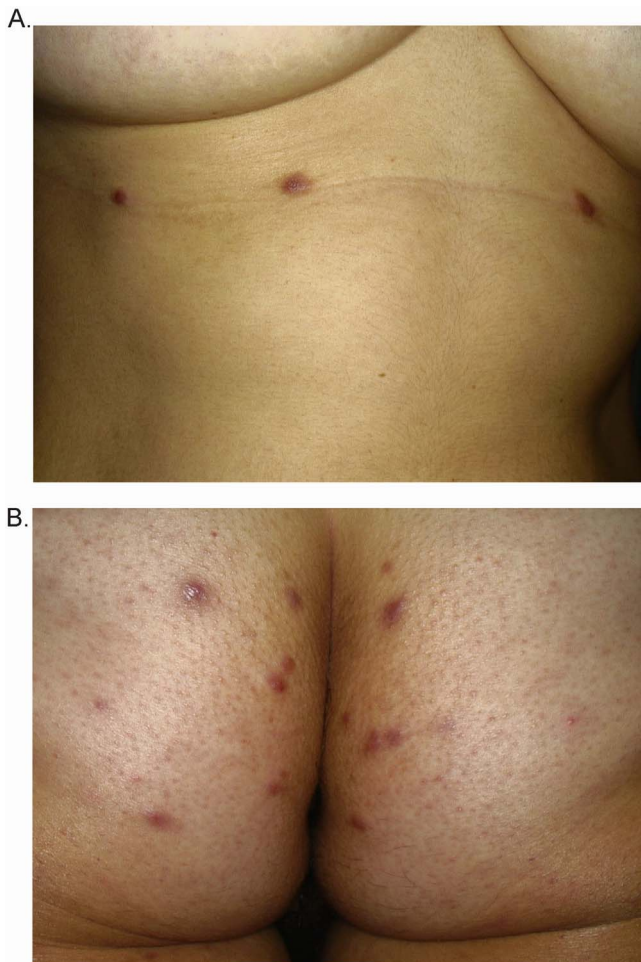


Fig. 1. A and B. Clinical picture of trombiculiasis: multiple erythematous papules and nodules of the trunk and buttocks.

Acknowledgment

The authors would like to thank Professor Salvatore Giannetto,



Fig. 2. Microscopic view of the mite *Neotrombicula autumnalis* (magnification $\times 200$).

D.V.M., for the scientific contribution and support in microscopic diagnosis.

References

- [1] Guarneri F, Puglese A, Giudice E, Guarneri C, Giannetto S, Guarneri B, et al. Trombiculiasis: clinical contribution. *Int J Dermatol* 2005;15(6):495–6.
- [2] Smal D, Jasmin P, Mercier P. Treatment of *Neotrombicula autumnalis* dermatitis in dogs using two topical permethrin-pyriproxyfen combinations. *J Small Anim Pract* 2004;45(February (2)):98–103.