Dermatology Practical & Conceptual

Optical Super-High Magnification Dermoscopy: a Complementary Means in the Diagnosis of Trombiculosis

Corinne Orsini[1], Giulio Cortonesi[1], Arianna Lamberti[1], Marco Campoli[1], Pietro Rubegni[1], Elisa Cinotti[1]

1 Department of Medical, Surgical and Neurological Science, Dermatology Section, University of Siena, S. Maria alle Scotte Hospital, Siena, Italy

Citation: Orsini C, Cortonesi G, Lamberti A, Campoli M, Rubegni P, Cinotti E. Optical Super-High Magnification Dermoscopy: A Complementary Means in the Diagnosis of Trombiculosis. *Dermatol Pract Concept*. 2023;13(2):e2023074. DOI: https://doi.org/10.5826/dpc.1302a74

Accepted: August 3, 2022; **Published:** April 2023

Copyright: ©2023 Orsini et al. This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial License (BY-NC-4.0), https://creativecommons.org/licenses/by-nc/4.0/, which permits unrestricted noncommercial use, distribution, and reproduction in any medium, provided the original authors and source are credited.

Funding: None.

Competing Interests: None.

Authorship: All authors have contributed significantly to this publication.

Corresponding Author: Corinne Orsini, Dermatology Section, University of Siena, S. Maria alle Scotte Hospital, 53100 Siena, Italy. Tel: 0039-0577 585481. Fax: 0039 0577 585488, Email: corinne.orsini@student.unisi.it

Case Presentation

In October 2021, a 27-year-old man working in the countryside of Tuscany (Italy) presented with a 3-day history of diffuse intense pruritus. Dermatological examination revealed multiple, erythematous macules localized on his right side of the trunk, the genitals, and the right popliteal fossa (Figure 1, A and B). A 10x dermoscopy examination revealed in the center of each macula the presence of a tiny bright yellow mite, hard to recognize due to its small size (Figure 1C). Videodermoscopy at 40x (Figure 1D) and 400x (Figure 1E) magnification (Medicam 1000, Fotofinder System(R)) allowed to observe six-legged golden colored parasites, strongly attached to the skin, and thus to identify an infestation of the larval stage of Neotrombicula Autumnalis, a mite involved in the underestimated and misdiagnosed trombiculosis.

Teaching Point

Trombiculosis is a common but underreported ectoparasitosis caused in Europe by the larval stage of Neotrombicula Autumnalis.

Diagnosis of trombiculosis can be difficult: clinical presentation is extremely vague, mainly asymptomatic, occasionally consists of multiple pruritic papules due to parasite biting.

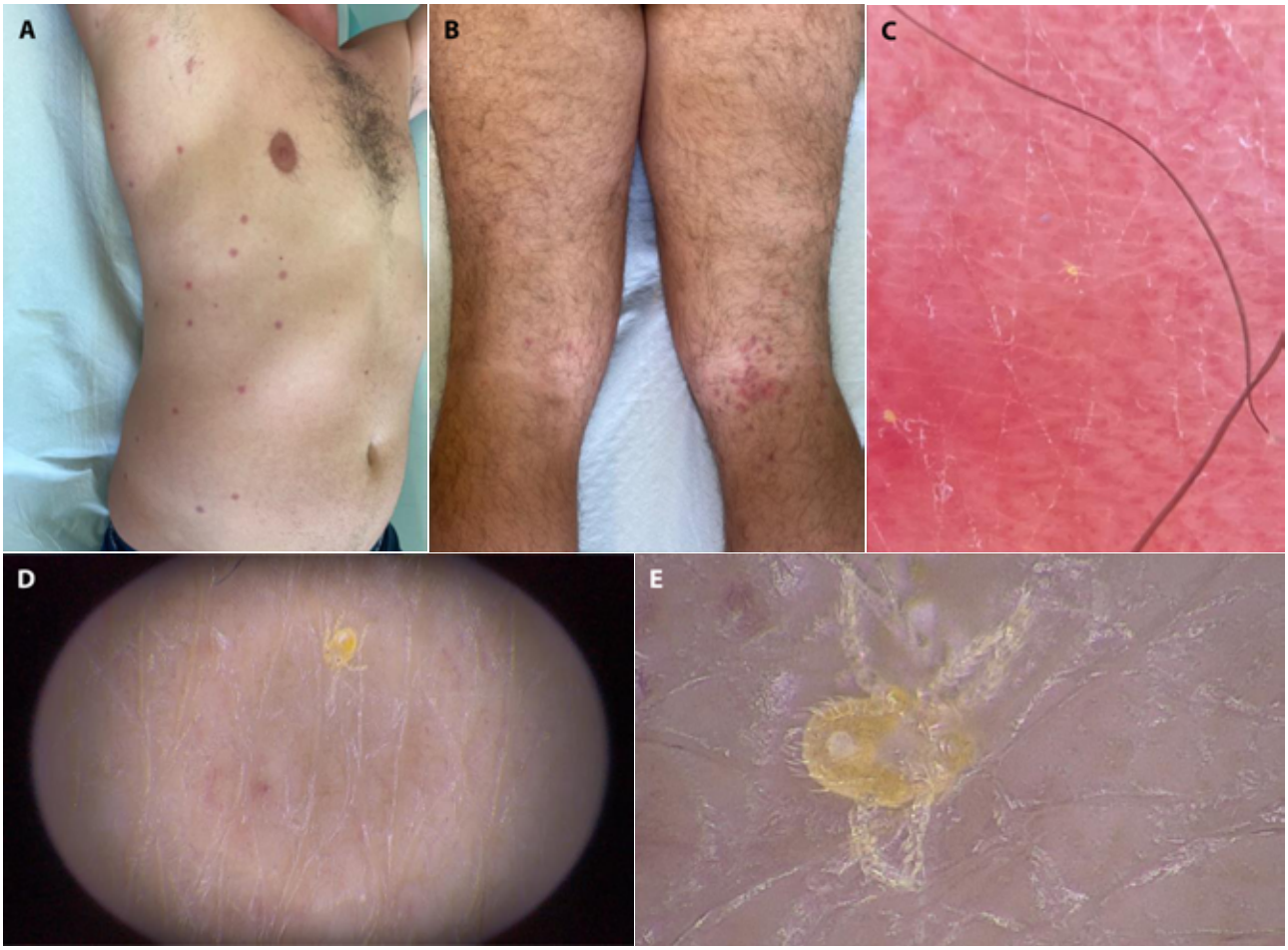

Figure 1. (A, B) Multiple, erythematous macules scattered on the right side of the trunk and right popliteal fossa. (C) Conventional dermoscopy 10x showed a tiny golden mite in the center of each macula. (D, E) videodermoscopy at 40x (D) and 400x (E) magnification of Neotrombicula Autumnalis (Medicam 1000, Fotofinder System(R)).

Futhermore, larvae show tiny dimensions (200-400 µm) and can easily be missed at conventional 10 x dermoscopy, so high-magnification dermoscopy could represent an useful means in the diagnosis of trombiculosis.

Only one case of Neotrombicula Autumnalis described by using high-magnification videodermoscopy was found in literature [1, 2]. In particular, under optical 400 x magnification, the color, the entire contour of the body and the details of the legs of the parasite are better visible, allowing a precise diagnosis.

References

1. di Meo N, Fadel M, Trevisan G. Pushing the edge of dermoscopy in new directions: entomodermoscopy of Trombicula autumnalis. *Acta Dermatovenerol Alp Pannonica Adriat*. 2017;26(2):45–46. DOI: 10.15570/actaapa.2017.14. PMID: 28632887
2. Nasca MR, Lacarrubba F, Micali G. Diagnosis of Trombiculosis by Videodermatoscopy. *Emerg Infect Dis*. 2014;20(6): 1059–1060. DOI:10.3201/eid2006.130767. PMID: 24856873. PMCID: PMC4036784.