



INFECTIOUS DISEASES (BACTERIAL, FUNGAL, VIRAL, PARASITIC, INFESTATIONS)

## HUMAN ECTOPARASITOSEs CAUSED BY GENUS BREVIPALPUS (ACARI: TENUIPALPIDAE)

*L Stingeni*<sup>(1)</sup> - *K Hansel*<sup>(1)</sup> - *L Bianchi*<sup>(1)</sup> - *M Tramontana*<sup>(1)</sup> - *S Principato*<sup>(2)</sup> - *I Moretta*<sup>(3)</sup> -  
*M Principato*<sup>(3)</sup>

*Clinical, Allergological And Venereological Dermatology, University Of Perugia, Department Of Medicine, Perugia, Italy*<sup>(1)</sup> - *Urania Research Center, Perugia, Italy, Urania Research Center, Perugia, Italy, Perugia, Italy*<sup>(2)</sup> - *University Of Perugia, Department Of Veterinary Medicine, Perugia, Italy*<sup>(3)</sup>

Background: Tenuipalpidae mites are parasites of plants, never previously described as able to attack humans. However, their recurring presence in the house dust of patients with suspected ectoparasitoses led us to verify their aetiological role.

Observation: Between June 2017 and September 2018 we observed lenticular erythematous-oedematous-vesicular and pustular lesions with papular evolution in 12 subjects (3 males and 9 females, all aged over 40 years). The lesions were itchy, mostly involving limbs, and also trunk, hands, neck, and face. A parasitological analysis by the Indoor Dust Direct Examination was carried out. A constant presence of a large number of Tenuipalpidae mites was detected especially in the patients' bedrooms, in absence of other arthropods of medical interest. All mites isolated belonged to two species of the genus Brevipalpus: *B. californicus* (Bank, 1904) in the houses of 8 subjects (all recorded in September) and *B. phoenicis* (Geijskes, 1939) in those of 4 subjects (in the period June-August). Most of mites were at nymphal stage. All the patients referred the presence of plants inside their dwellings or of a neighbouring garden. Their removal, together with an insecticidal barrier along the internal perimeter of windows, induced resolution of skin lesions, without recurrences in 1-year follow up.

Key message: Tenuipalpidae mites, called "Flat mites", due to their flat venter or flat dorsum, are well known in the agricultural field, because they are all phytophagous and those species identified as pests can cause severe economic damage. They have never been reported before as potential agents of skin lesions. However, when they spread in domestic environments, climbing on furniture and penetrating into clothes, they can sting the human skin, especially at their nymphal stages. We emphasise the importance of a correct identification of *Brevipalpus californicus* and *Brevipalpus phoenicis* for an effective strategy of disinfection.

