

Tungiasis Presenting with Sterile Pustular Lesions on the Hand

Sir,

Tungiasis is an infestation caused by *Tunga penetrans* L., a flea that lives on dry and sandy ground in Central and Southern America, sub-Saharan Africa and Central Asia. We describe a case of tungiasis, atypical for its localization and clinical characteristics of the lesions.

CASE REPORT

A 30-year-old man was admitted because of the appearance of 2 papulo-pustular lesions on the back of the second and third finger of the left hand. The lesions were round, about 0.5 cm in diameter, yellowish in colour and circumscribed by an erythematous halo; in the centre of the lesions a brownish raised punctum was present (Fig. 1). The patient stated that the lesions had appeared 2 weeks before, when he was on vacation in Venezuela, and that they were accompanied by intense pain. Laboratory examinations were within normal ranges. Bacteriological and mycological examinations (Tzanck tests and cultures) of the pus obtained from both lesions were negative. In the material collected by curettage, we observed eggs and fragments of *T. penetrans*. Histopathological examination of one lesion showed the presence of a pseudocystic cavity localized in the epidermis and upper dermis; this cavity contained a tunga in which egg-laden ovaries and respiratory and gastrointestinal organs were visible. Furthermore, an inflammatory infiltrate consisting of lymphocytes and neutrophils with numerous eosinophils was observed at the periphery of the cavity.

DISCUSSION

The pregnant female of *T. penetrans* burrows into the skin and excavates a cavity down to the upper dermis in order to nourish on the blood of the host.

Because of the absence of wings, tunga has adapted itself to jump. Nevertheless, it is able to jump only up to a height of a few cm and this explains the almost exclusive infestation of the feet (toes, peri- and subungual folds, interdigital spaces, soles and heels). All the other localizations are rare. In particular, involvement of the hands is exceptional; to our knowledge, only one case has been reported in the literature (1). Furthermore, in our clinical experience, based on approximately 30 cases, we have never observed patients with tungiasis of the hands.

The infestation presents with papulo-nodular lesions, single or multiple, whitish, grey or yellowish in colour, and with a black central punctum corresponding to the posterior portion of the flea's abdomen. These lesions may be more or less erythematous, sometimes covered by a brown-black crust. Tungiasis presenting with sterile pustular lesions is very rare (2-4); on the other hand, bacterial superinfection of the lesions, particularly by *Staphylococcus aureus* and gram-negative bacteria, is of frequent occurrence (5). The develop-



Fig. 1. Papulo-pustular lesions on the back of the second and third finger.

ment of sterile pustular lesions might be the result of a necrotic phenomenon of the epidermis and upper dermis due to lytic enzymes produced by the flea (6).

In the Western hemisphere, the occurrence of even more frequent tropical skin diseases should improve our understanding of the clinical and therapeutic aspects of these diseases. The words of Seneca "non sum uni anguli natus, patria mea totus hic mundus est" (Epistulae XXVIII) ("the whole world is my country") could not be more real today.

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Stefano Veraldi, Sabrina Camozzi and Gabriele Scarabelli
Institute of Dermatological Sciences, University of Milan, IRCCS,
Via Pace 9, I-20122 Milan, Italy.