

***Sclerodermus domesticus* Infestation: An Occupational Disease in Antiquarians and Restorers**

To the Editor:

Sclerodermus domesticus is an insect belonging to the order Hymenoptera, of the family Bethyridae and subfamily Scleroderminae. *S. domesticus* is cosmopolitan; however, it lives mainly in temperate climates. It usually stings from April to September. Its natural habitat is represented by old wooden furniture (beds, chairs, armchairs) and woolen mattresses. The female of *S. domesticus* is 2 to 4 mm long, often wingless, aculeate, and brownish black in color. It feeds on the larvae of xylophagous insects of the orders Coleoptera and Lepidoptera; these insects dig burrows in old wooden furniture. The female of *S. domesticus* paralyzes these larvae by injecting a venom. Subsequently, it feeds on the larvae and lays its eggs on the living but paralyzed larvae; the latter provide fresh nourishment for the newborn larvae of *S. domesticus*. Human infestation is rare.

We present a case of *S. domesticus* infestation in an antiquarian.

A 62-year-old antiquarian was admitted because of a rash of 6 weeks' duration localized to both legs. Dermatologic examination showed multiple erythematous papular purpuric lesions (Fig 1) accompanied by pruritus and pain. In addition, the patient complained of general malaise and fever. General physical examination did not reveal anything pathologic.

Laboratory tests included a complete blood count, protein electrophoresis, immunoglobulins, renal tests (urea, creatinine, and electrolytes), hepatic tests (bilirubin, transaminases, γ -glutamyltransferase, alkaline phosphatase, cholinesterase, and lactic dehydrogenase), inflammatory tests (erythrocyte sedimentation rate, C-reactive protein, and α 1-acid glycoprotein), and urinalysis. They were all within normal ranges or negative.

The patient was subjected to biopsy. Histopathologic examination was characterized by edema and vasodilatation

in superficial dermis; in addition, a perivascular infiltrate consisting of neutrophils and lymphocytes with some eosinophils was observed.

A diagnosis of *S. domesticus* infestation was confirmed by the finding of several specimens of the insect (Fig 2) in the patient's furniture and house dust. Insect identification was performed by an entomologist.

Complete remission was achieved by means of topical corticosteroids and oral antihistamines as well as by pest control of furniture by spraying 0.1% cyfluthrin, a synthetic pyrethroid.

S. domesticus stings are followed by the appearance of multiple erythematous papular urticarial lesions (papular urticaria).¹⁻⁵ Hemorrhagic lesions also have been described.³ The lesions are accompanied by pruritus,^{1,2,4,5} burning,³ and pain.^{2,3,5} The rash may disappear



Figure 1. Erythematous papular lesions on the leg.

From the Dipartimento di Anestesiologia, Terapia Intensiva e Scienze Dermatologiche, Università degli Studi di Milano, Fondazione I.R.C.C.S. Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy.

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Figure 2. *Sclerodermus domesticus*.

spontaneously in 7 to 14 days. However, in some reported cases, the rash persisted for many months despite the use of topical corticosteroids, antiparasitic drugs, and systemic antihistamines.⁵ Systemic symptoms are not rare and include general malaise,⁵ asthenia,⁵ nausea, mild fever,³ and dizziness.

Diagnosis of *S. domesticus* infestation is based on clinical history (the job of the patient), the clinical picture (erythematous papular urticarial lesions, accompanied by pruritus or pain or both), and the possible presence of systemic symptoms (general malaise and fever). In most

cases, it is not difficult to isolate *S. domesticus* from furniture or environmental dust. Examination of the furniture reveals many holes caused by the previously mentioned xylophagous insects. The patients themselves are often able to capture the insects in the furniture or in the mattress. Differential diagnosis includes *Pyemotes herfsi*, bedbug, and flea bites.

Treatment of *Sclerodermus domesticus* infestation is symptomatic. Topical corticosteroids and oral antihistamines are usually effective; however, pest control of furniture and mattresses is necessary to avoid recurrences.

S. domesticus infestation occurs mainly in carpenters, antiquarians, and restorers.⁵ This infestation can therefore be considered an occupational disease.

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Stefano Veraldi

Stefano Maria Serini

Silvia Alberti Violetti

Dipartimento di Anestesiologia, Terapia Intensiva e Scienze Dermatologiche, Università degli Studi di Milano, Fondazione I.R.C.C.S. Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy

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