

A 'chigsaw' puzzle after a vacation in Brazil

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CASE REPORT

A 59-year-old, otherwise healthy, Dutch male consulted the Institute for Tropical Diseases of the Havenziekenhuis in Rotterdam for the diagnosis of itching skin eruptions during a vacation in Brazil. He developed intensely pruritic red papules on his hips, buttocks and upper legs after walking in the jungle and spending the night on towels on the beach at the Tapajós River (a branch of the Amazon river) near Jamaraquá.

At clinical examination, there were some small crustae and skin wounds distributed around the waist, probably due to scratching. However, he presented photographs taken from the skin eruptions during his holiday. These showed symmetrical, papular erythematous and oedematous eruptions over the hips, buttocks and upper legs (*figure 1*). The diameter of the lesions varied between 1 and 5 mm.

WHAT IS YOUR DIAGNOSIS?

See page 325 for the answer to this photo quiz.

Figure 1. *Symmetrical, papular erythematous and oedematous eruption over the hips, buttocks and upper legs in our patient*



DIAGNOSIS

A diagnosis of trombiculiasis, also known as chigger bites, was made.

DISCUSSION

Trombiculiasis or chiggers is a dermatosis caused by the biting larvae of trombiculid mites. Trombiculid mites live in soil in warm, humid areas of forests and scrub vegetation. Adult mites live on small insects and their eggs, while only the larvae are ectoparasites to mammals (accidentally humans).¹ The larvae crawl up the body of a host and seek thin skin or areas with tight clothing to settle. They then inject saliva containing lytic enzymes via chelicerae to feed on dissolved epithelial cells.² This digestive saliva is repeatedly injected and evokes an immune response that causes the typical severely itching papular skin lesions found mostly on the lower legs, around the waist, on the buttocks or in the armpits.^{1,2}

Of the trombiculid mites found in different parts of the world, *Eutrombicula alfreddugesi* is the most common in the North and South of the Americas, and most likely to have been the causative species in our patient. *Neotrombicula autumnalis* is found mostly in Europe (including the Netherlands) whereas *Eutrombicula sarcina* is the most prevalent species in Asia.¹ While all trombiculid larvae cause similar local skin lesions, only the larvae of the *Leptotrombidium* species (Asian scrub typhus chigger mite) are able to transfer *Orientia tsutsugamushi*, the causative bacterial organism for scrub typhus.¹

Although not often reported in the literature, this clinically typical dermatosis is prevalent all over the world, except for the arctic regions. Favouring a warm environment, chigger larvae are present all the year round in tropical climates and during the summer time in Europe and North America. In Europe and North America, the larvae and the associated skin lesions are particularly present in late summer and early autumn (hence the terms 'augustelingen' in Dutch and 'aoûtats' in French).³ Normally transient and without systemic signs, trombiculiasis can be easily missed. In case of systemic signs in a traveller from Asia, scrub typhus has to be ruled out. The cutaneous lesions and the itching can be controlled by topical corticosteroids, whereas an *O. tsutsugamushi* infection needs to be treated with antibiotics.⁴

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