

# *Cutaneous larva migrans in two Slovenian travelers returning from Brazil*

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## S U M M A R Y

Cutaneous larva migrans is a frequent phenomenon endemic in tropical and subtropical countries. In Europe only sporadic cases are reported. We present two cases of cutaneous larva migrans in two Slovenian tourists returning from a vacation in Brazil.

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### *Introduction*

Cutaneous larva migrans (CLM) is the most common tropically acquired dermatosis, first reported by Lee in 1874 (1). It is caused by a skin-penetrating and migrating larval parasite and usually shows characteristic, easily recognizable lesions. Diagnosis is based on history and clinical symptoms.

CLM is usually a benign and self-limited dermatosis. Although the larvae usually die within 2 to 8 weeks, in some cases survival up to 2 years has been reported (2).

### *Case report*

Two 27-year-old males presented with a few days' history of pruritic cutaneous eruptions on their feet. Ten days earlier they had returned from a vacation in Brazil. They gave no history of fever, or pulmonary or intestinal difficulties. Clinical examination revealed bizarre

erythematous, slightly raised, snake-like eruptions on their feet (Fig. 1, 2). Both the clinical features and the information that they had walked barefoot on the beach during their vacation favored the diagnosis of cutaneous larva migrans. Laboratory examination showed normal levels of eosinophils and immunoglobulin E. A biopsy was performed in one patient only. Histopathology revealed spongiosis of the epidermis and a mixed inflammatory infiltrate composed of lymphocytes, histiocytes, and some eosinophils in the dermis.

Treatment with oral albendazole 400 mg daily for 3 days was successful. The cutaneous lesions disappeared within a few days.

### *Discussion*

Cutaneous larva migrans is a frequent disease in tropical and subtropical countries. The disease is endemic to the islands of the Caribbean, Africa, South America, Southeast Asia, and the central and southeast-

## K E Y W O R D S

cutaneous larva  
migrans,  
tropical  
dermatosis,  
travel-  
associated  
dermatoses



**Figure 1. Cutaneous larva migrans: Multiple bizarre linear and serpiginous erythematous tracks on the left foot in patient 1.**



**Figure 2. Cutaneous larva migrans: Serpiginous, snake-like eruptions with vesicles on the toes of the right foot in patient 2.**

ern states of the US. The endemic nature of this disease is caused by poor sanitation and suitable environmental conditions. In Europe, only sporadic cases are reported among travelers returning from tropical countries.

The most common cause is *Ancylostoma braziliense*, and less common species are *Ancylostoma caninum*, *Uncinaria stenocephala*, and *Bunostomum phlebotomum*. In rare cases CLM is caused by human hookworms, such as *Strongyloides stercoralis*, *Ancylostoma duodenale*, and *Necator americanus*, and only exceptionally by insect larvae (3, 4).

In animal hosts, the parasites enter the body through the skin, penetrate the dermis, and migrate through the lungs before reaching the intestines, where they mature into adult parasites. In accidental hosts, such as humans, they can enter the epidermis but cannot penetrate the dermis, and they migrate within the epidermis for a few weeks before dying.

The incubation period ranges from a few hours up to 30 days. Infection begins with a pruritic, erythematous papule or vesicle at the point of penetration. Cutaneous manifestations are caused by skin-penetrating and migrating larva parasites, usually exhibiting characteristic, easily recognizable features. Migration of larvae produces pruritic serpiginous and slightly elevated erythematous tunnels that are 2–3 mm wide and advance 2–3 cm per day. The skin lesions are caused by an allergic immune response to the larvae. The actual location of the larvae is usually 1–2 cm beyond the erythematous track. Multiple larvae can be active at the same time, with the formation of disorganized loops and tortuous tracks. Multiple vesicles and folliculitis may appear. The CLM lesions are intensely itchy, sometimes producing a burning sensation, and scratching may cause a secondary infection that can lead to diagnostic confusion (5, 6).

The diagnosis of CLM is based on physical examination and history of the disease. A skin biopsy is usually not helpful because the location of the larvae is uncertain, and thus is not recommended as a diagnostic procedure. In rare cases, histopathological examination may show a larva in a suprabasal burrow, basal layer tracts, spongiosis with intraepidermal vesicles, necrotic keratinocytes, and an epidermal and upper dermal chronic inflammatory infiltrate with many eosinophils. Rarely, peripheral eosinophilia and increased immunoglobulin E levels may be seen. Stool examination is worthless except for *Strongyloides*, where larvae may be seen (7).

Although CLM is usually a benign and self-limited disease, treatment is necessary because of possible complications and intense pruritus. Prior to the availability of antihelminthics, cryotherapy was used, but it was imprecise and only effective in perhaps half of all cases. Nowadays this method is not recommended. Topical use of thiabendazole is suitable for early, localized lesions whereas the systemic use of thiabendazole is preferred for the treatment of widespread lesions, but is limited due to a high incidence of adverse effects. More successful treatment includes the new antihelminthics albendazole and ivermectin. Treatment of CLM with a single oral dose of ivermectin has been documented to be 80 to 100% successful without any side effects (8, 9, 10).

In our patients the diagnosis was based on typical clinical features and the history of the present illness. Because there was no history of fever, or pulmonary or intestinal difficulties, visceral involvement was excluded. To the best of our knowledge these are the first reported cases of CLM in Slovenia.

We conclude that frequent travel abroad results in an increased number of sporadic cases of CLM in non-endemic countries.

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