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A case report of cutaneous larva migrans in Argentina

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ABSTRACT

Cutaneous larva migrans (CLM) represents the most common tropically acquired dermatosis. CLM is caused by infection with hookworm larvae in tropical and sub-tropical areas, and people who have a history of foreign travel and of walking barefoot on sandy soil or beaches are at a high risk of getting infected with it. The diagnosis is usually made on the basis of the typical appearance of the lesion, intense itching and history of foreign travel. CLM is a common parasitic skin disease that can be easily prevented by wearing 'protective' footwear. A case of CLM is described in this article.

1. Introduction

Cutaneous larva migrans (CLM) is caused by infection with hookworm larvae in tropical and sub-tropical areas and people who have a history of foreign travel and of walking barefoot on sandy soil or beaches are at a high risk of getting infected with it[1]. CLM, with characteristics of skin changes, is usually caused by penetration of larvae from intestinal nematodes originating from animals[2]. Because of biogeographical conditions this disease often affects travellers returning from warm climate countries[3].

2. Case report

A 33-year-old female patient was admitted to our Department of Infectious Diseases because of skin changes localized to the left foot. Within one week after returning from holidays in Brazil the patient had noticed the rapid occurrence of creeping changes on the left foot

with concomitant pruritus. Examination revealed a typical serpiginous lesion (Figure1) and a diagnosis of CLM was made on clinical grounds. Both the lesion and the itching were cured with oral albendazole (400 mg daily for 5 days) within one week.

3. Discussion

Historically, the term 'cutaneous larva migrans' has synonymous meaning with 'creeping eruption' which is caused by animal hookworm larvae, most commonly *Ancylostoma braziliense* (*A. braziliense*). However, recently it has been defined as a syndrome caused by the subcutaneous larval migration of many different types of nematodes. When animal hookworm larvae are involved, the disease is called hookworm-related CLM. When humans, dogs and cats are infected percutaneously with larvae of their own host-adapted hookworms, the lesion at the penetration site varies from nil to an erythematous papular or vesicular rash with varying levels of pruritus. The pathognomonic cutaneous sign is described as a linear, or serpentine-like, slightly elevated and erythematous track that moves forward in an irregular pattern. Creeping eruption usually develops

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1–5 days following skin penetration, or even longer in travellers. In most cases, a very intense itchiness develops shortly after skin penetration and is described by patients as very uncomfortable. Pain can also be present[3].

CLM syndrome can be easily misdiagnosed and thus treated incorrectly. In CLM laboratory abnormalities are usually absent. In addition, a skin biopsy is most often non contributory because of migration of larvae through the skin resulting in larvae absence in the large majority of the histopathological specimens[4]. A history of foreign travel and walking barefoot or sitting or lying on the beach is commonly associated with cutaneous larva migrans, which

is found in 95% of the cases[4].

Geographically, the distribution of hookworm associated CLM appears to mirror the geographic distribution of *A. braziliense*. Most reported cases are tourists who frequented beaches in regions where *A. braziliense* is endemic in dogs and cats. *A. braziliense* is found along the southeastern Atlantic coast of North America, the Gulf of Mexico and the Caribbean Sea, down to Uruguay in South America, in Africa (South Africa, Somalia, Democratic Republic of Congo, Sierra Leone), Australia and Asia. The disease does not occur after exposure to beaches where *A. braziliense* is not present, e.g. the Pacific coast of the USA and Mexico[5].



Figure 1. Photograph of left foot taken on date of presentation showing typical serpiginous lesion of cutaneous larva migrans. Photo courtesy of Javier Bava, MD, Ph.D.

To control hookworm-related CLM at the community level, regular treatment of dogs and cats with anthelmintic drugs is necessary, but this is seldom feasible in resource-poor settings. Animals should be banned from beaches and playgrounds. Tourists are often not aware of the risk for acquiring hookworm-related cutaneous larva migrans when walking barefoot on beaches, or when sunbathing on the beach. Thus, the fact that most cases in tourists acquired it on tropical beach destinations reflects a typical risk behaviour of tourists rather than the true distribution of hookworm larvae in the endemic area[6].

The disease causes discomfort and substantial morbidity. Adequate prevention measures using an integrative approach need to be implemented to reduce the occurrence of hookworm-related CLM. For protection at the individual level, unprotected skin should not come into contact with possibly contaminated soil[7].

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Conflict of interest statement

We declare that we have no conflict of interest.

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