



## Case Report

## Cutaneous larva migrans: A case report successfully treated with albendazole

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## ARTICLE INFO

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## ABSTRACT

**Introduction:** Cutaneous larva migrans (CLM) is helminthic infection that is mostly found in tropical and subtropical areas [1]. It is commonly seen with those who have contact with soil that is contaminated by cat and dog's hookworm larvae. CLM present as erythematous, serpiginous, pruritic cutaneous eruption that is caused by accidental percutaneous penetration and subsequent migration of larvae

**Case:** We present a case of 45 year old male with erythematous, serpiginous, pruritic eruption over the dorsum of foot.

**Clinical findings and investigations:** Patient had a 2–3 cm linear, erythematous, serpiginous localized lesion characteristic of a papular tip on the dorsal surface of the right foot. Total and differential blood counts, peripheral blood smear and chest x-ray were sent for investigations.

**Intervention and outcome:** Patient was prescribed Albendazole at a dose of 400mg, once a day for seven days. After treatment, the lesion and pruritus had regressed significantly.

**Conclusion:** Hookworm-related CLM is diagnosed clinically based on the typical clinical presentation (skin findings). Clinicians should be aware of the possibility of hookworm-related CLM with history of travel to tropical areas, specially walking barefoot.

## 1. Introduction

## 1.1. Background and rationale

Cutaneous larva migrans or creeping eruption is uncommon parasitic infection usually caused by filariform larvae of dogs or cat hook worms. It is usually found in tropical and subtropical geographic areas [1]. It is commonly seen with those who have contact with soil that is contaminated by cat and dog's hookworm larvae. CLM present as erythematous, serpiginous, pruritic cutaneous eruption that is caused by accidental percutaneous penetration and subsequent migration of larvae.

Guidelines: SCARE 2020 paper [2].

This case has been reported in line with the SCARE criteria.

## 2. Case report

## 2.1. Patient information

## 2.1.1. Demographics and presentation

A 45 year old male from Nepal, security guard by occupation came to our opd with complaint of erythematous, serpiginous pruritic eruption over the dorsum of right leg since 2 weeks. Prior to development of these lesions he had intense itching over the site. No history of any travel to endemic area.

## 2.1.2. Past history

No history of similar lesions in the past.

## 2.1.3. Family history

Non significant family history.

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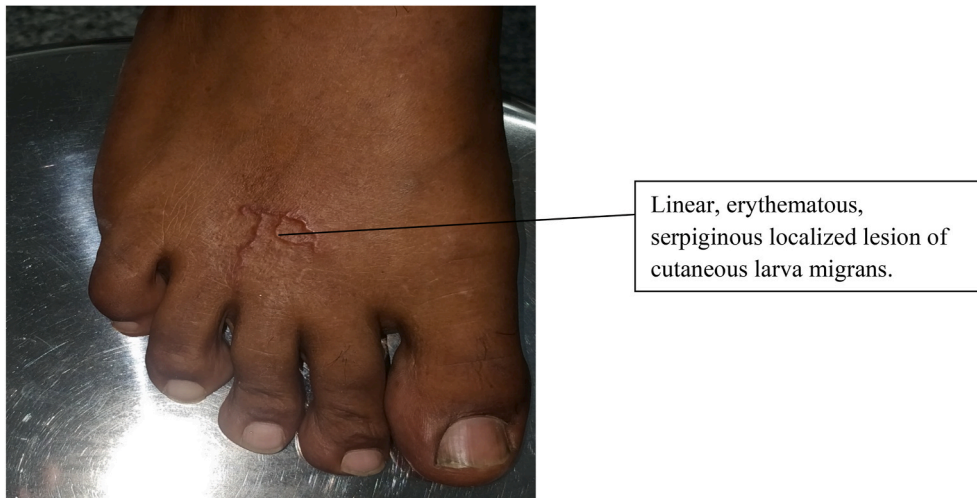


Fig. 1. Linear, erythematous, serpiginous localized lesion on dorsal surface of right foot.

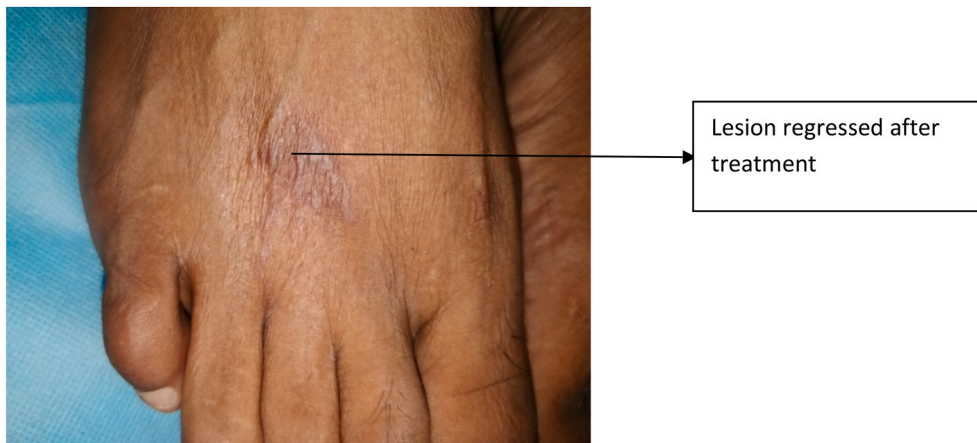


Fig. 2. Post treatment with Albendazole (Regression of lesion).

#### 2.1.4. Drug and allergy history

No significant drug and allergy history.

#### 2.2. Clinical findings

On examination, we found a 2–3 cm linear, erythematous, serpiginous localized lesion characteristic of a papular tip on the dorsal surface of the right foot (Fig. 1). No similar lesions were found elsewhere in the body. Systemic examination was normal.

#### 2.3. Diagnostic assessment and interpretation

Routine blood investigation was done and there was no evidence of eosinophilia. Peripheral smear and chest X ray were within normal limits [3]. Diagnosis of cutaneous larva migrans was made clinically. We prescribed him Albendazole 400mg to be taken once a day [4] for 7 days.

#### 2.4. Outcome and followup

The patient was followed up after 7 days of starting Albendazole. We observed that the lesion and patient's complaints had regressed significantly (Fig. 2).

### 3. Discussion

CLM is most commonly acquired tropical disease that is originally found in tropical and subtropical geographic areas such as, Africa, Middle and South America and Southeast Asia [5]. However, due to increase in foreign travel this is not restricted to these areas only. Mainly the offender is *Ancylostoma braziliense*.

In CLM, the parasitic life cycle begins when eggs from animal feces are passed into warm and moist soil where the larvae is produced. The larvae when comes in contact with human skin is able to penetrate the dermis [6]. Most of the people become infected by walking barefoot, wearing open-toe shoes. Similar history of walking bare foot was present in our patient. The larvae generally migrate in tunnel between the epidermic layer of the stratum germinativum and stratum corneum [7]. Larvae may be present 1–2 cm from the penetration site. Larvae can migrate 2–5 mm in a day. Later on, it leads to a 2–3-mm-wide pinkish, edematous, linear, serpiginous and shapeless lesion [8].

Lesions are typically distributed on the lower distal extremities, including the dorsa of the feet and the interdigital spaces of the toes but can occur in anogenital region. Secondary infection also may be present in the lesion. Intense itching is seen the CLM lesion. Usually eruption ends in 2–8 weeks but may extend to years. Systemic complications like peripheral eosinophilia (Loeffler syndrome) and pulmonary infiltrates and increased immunoglobulin E (IgE) levels are rarely seen [9]. Our patient had no eosinophilia and lung involvement.

Hookworm-related CLM is diagnosed clinically based on the typical clinical presentation (skin findings), which is a pruritic, serpiginous lesion with history of sunbathing, walking barefoot on the beach, or travel to high-risk tropical location. Laboratory findings are non-specific. Transient peripheral eosinophilia may be seen. Biopsy may be done to confirm the diagnosis [10]. Other differential diagnosis such as bacterial and fungal cutaneous infection and other parasitic diseases should be considered.

#### 4. Take away lesson

Clinicians should be aware of the possibility of hookworm-related CLM with history of travel to tropical areas, walking barefoot. After treatment with Albendazole, patients become free of symptoms and the cutaneous lesion regresses.

#### Ethical approval

None.

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#### Author contribution

Sandhya kiran Neupane, Department of Medicine, Shadhak Polyclinic, Kathmandu, Nepal. First Author: she has done the discussion part, Dr. Sandesh Shah, Department of Dermatology and Venerology, HAMS Hospital, Kathmandu second author: he has presented the case. Prabhat Kiran Neupane, Internship at Department of Medicine, Kist Medical College, Kathmandu. Third author: Editor of the article.

#### Registration of research studies

Name of the registry:

Unique Identifying number or registration ID:

Hyperlink to your specific registration (must be publicly accessible and will be checked):

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#### Informed consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

#### Provenance and peer review

Not commissioned, externally peer reviewed.

#### Declaration of competing interest

There is no any conflicts of interest with this article.

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