

**A Paediatric Case Report of Cutaneous Larva Migrans**

**V. Thadchanamoorthy\***

Senior lecturer and Consultant Paediatrician, Teaching Hospital, Batticaloa, Sri Lanka

**Case Report**

**\*Corresponding author**  
*V. Thadchanamoorthy*

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**Abstract:** Cutaneous larva migrans (CLM) is a tropical and subtropical parasitic infection caused by hookworm infection which inhabit in domestic pets such as cats and dogs. Larva found in infected soil, accidentally penetrates the intact skin and causes lesions which are an erythematous, serpiginous, and extremely itchy. The reported case was clinically diagnosed as CLM had multiple lesions without complications and successfully treated with albendazole.

**Keywords:** Parasitic infection, Cutaneous Larva Migrans, Albendazole.

**INTRODUCTION**

CLM is one of the parasitic infections which is frequently seen in tropical and subtropical climates [1]. It is more commonly seen in children who play in soil and contaminate themselves by hookworm larvae of cat and dog. Therefore, overcrowding with poor sanitation and unhygienic practices have a role in the causation of this disease [2]. The larvae penetrate and subsequently migrate under the skin and form tract like, pruritic, serpiginous and erythematous lesion, [1, 2]. It preferentially infects lower parts of the body such as buttock and lower limbs [3]. It was first described and reported by Lee in 1874[4].

**CASE HISTORY**

A 5-year-old preschool male child presented to paediatric clinic with the history of multiple erythematous, serpentine, and pruritic linear cutaneous lesions over sole and dorsum of the foot [figure 1], buttock and perianal area [Figure2 ]. It caused sleep disturbance and interfered the child’s daily activities. There was a history of walking on barefoot and playing in the sand without pant. Their home environment and sanitation are also poor. Otherwise rest of the history was normal

The first lesion started on his buttock in a size less than 1cm in diameter and extended up to the anus. It was treated as pruritus anus by mebendazole for four weeks by General Practitioner. Despite the treatment, the size of the lesion was progressing, and tract extended into the anus as well. Therefore, he was referred for consultant assessment and management.

Upon assessment, the lesion was almost more than 15cm in diameter on the buttock with variable extension into the anus. Further, two lesions were

noted; one was about 20cm on the dorsum of the foot and second one was 4cm on the sole of the foot. White cell count and CRP level were within normal limits.

The clinical diagnosis of cutaneous larva migrans was arrived and the child was treated with albendazole and antihistamine. Lesions in the foot and buttock resolved within 2 weeks. But perianal lesion with anal penetration took 3months to resolve completely.



**Fig-1: (Lesion in the dorsum of the foot)**



Fig-2: (Lesion in the buttock and perianal area)

## DISCUSSION

Even though Cutaneous larva migrans has been distributed all over the world, it has more affinity towards warm climates, such as the southeastern parts of the US, Central and South America, Africa and other tropical countries like Sri Lanka [3, 5]. This condition has also been named as creeping eruption, plumber's itch, creeping verminous dermatitis, sand worms and duck hunter's itch [6].

The hookworm larva of *Ancylostoma braziliense* and less commonly *Ancylostoma caninum*, *Uncinaria stenocephala* and *Bunostomum phlebotomum* and also some species of *Necator* are the most common intestinal parasites in cats and dogs [3, 7]. Children become infected by walking barefoot, or sitting in dirtied soil or sand contaminated with cats or dogs excreta. The index patient plays with his pets (cat and dog) and also plays in the soil.

The incubation period ranges from 1 to 6 days. When larvae enter into skin and secrete proteases and hyaluronidase which help to form tunnels between the epidermal layer of the stratum germinativum and stratum corneum [8]. Larva is known to migrate 2-5 mm per day. The eruption usually lasts 2-8wks, sometimes extends up to 2years.

It initially causes local itchy erythematous papular lesions, subsequently forms shapeless lesions which are extremely pruritic [5]. It might produce linear tunnels which are edematous and serpiginous. As child scratches the lesion, it gets infected with the secondary bacterial infection [5, 9]. The child described has intense itchy especially in the night and it disturbed his sleep. He did not have secondary bacterial infection. Systemic involvements like Löffler syndrome and migratory pulmonary infiltrates are rarely seen [10]. There is no such features in my case.

Investigation has limited role except systemic involvement where there might be peripheral

eosinophilia and increased serum IgE [8]. There are two methods of definite diagnosis such as Epiluminescence microscopy is an effective noninvasive and biopsy is an invasive tool to confirm larva [11, 12]. These investigations are not used in routine clinical practice. Hematological investigations such as full blood count and CRP, were normal. No further investigations were done. Diagnosis was arrived based on clinical features.

As CLM is a self-limiting disease, however the treatment is indicated if patient has intense pruritus or complications. Treatment of CLM includes eradication of larva from the patients and complication like superadded bacterial infection and allergic to migratory larva [13]. CLM per se is successfully treated with the new anthelmintic like albendazole and ivermectin [5, 9]. Studies showed that all patients who treated with oral albendazole showed complete clearance of the lesions during follow-up. There are evidence that a single dose of ivermectin (200 µg/kg) and 3 days regimen of albendazole (400 mg/day) has similar efficacy [13]. The index case had good response to albendazole. Itching had been treated with antihistamine

There are lesions which mimic CLM include scabies, erythema chronicum migrans, larva currens, phytophotodermatitis, and dermatophyte infections and so correct diagnosis leads to correct treatment [14].

Appropriate treatment with follow-up carries good prognosis. Public education combined with early recognition and treatment helps in preventing complications. At the same time, cats and dogs should be treated with anthelmintic drugs and avoiding contact with contaminated soils helps in eradication. Apt management of animal reservoirs may be operative in controlling cutaneous larva migrans.

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There is no conflict of interest

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