Case Report

Crawling Under the Skin - A Case Report of Cutaneous Larva Migrans in a 2-month-old Baby

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ABSTRACT

Introduction: Cutaneous larva migrans is characterized by serpiginous, creeping skin lesions caused by animal hookworm larvae and is commonly encountered in tropical and subtropical regions. The larvae are excreted in animal feces, contaminate soil or sand, and penetrate human skin upon direct contact. In Malaysia, the disease burden is likely underestimated due to underreporting and misdiagnosis.

Case Presentation: We report a case of a 2-month-old infant who presented with cutaneous larva migrans involving the upper back. The family had no pets, and the infant was not allowed to roam on soil. Further history revealed that the infant's feet had been placed on grass in a public park during a brief family outing. The skin lesion was noted two days after this exposure.

Discussion: Cutaneous larva migrans is rare in infancy and has been reported mainly in infants of crawling age; however, our patient was extremely young and not yet able to crawl. Management in young infants can be challenging. Systemic agents such as oral ivermectin and albendazole have reported cure rates exceeding 90% but may be associated with adverse effects. Oral albendazole is recommended by the WHO only for children aged above 12 months. Therefore, topical therapy is preferred in younger infants. In this child, complete resolution was achieved with topical albendazole 10% paste, without any observed adverse effects.

Conclusion: Preventive measures, including avoiding direct skin contact with potentially contaminated soil and maintaining good hygiene practices, are essential. Based on our literature search, this appears to be the youngest reported case of cutaneous larva migrans in Malaysia.

Keywords: Cutaneous larva migrans; Serpiginous; Hookworm; Infant; Topical albendazole; Malaysia

INTRODUCTION

Cutaneous larva migrans (CLM) is a neglected zoonotic disease commonly seen in tropical and subtropical regions, including the southeast United States, Latin America, Southeast Asia, and Africa [1,2]. Although the true burden of CLM in Malaysia is unknown, a study from Hospital Kuala Lumpur reported 31 cases over 4 years, with only 45.2% receiving the correct diagnosis from referring primary care doctors [3]. Notably, all reported cases occurred in adults, with no pediatric cases identified, underscoring the paucity of data on CLM among children in Malaysia.

CLM, also known as creeping eruption, sandworm eruption, plumber's itch, or duck-hunter's itch, is caused by the larvae of dog or cat hookworms—commonly Ancylostoma caninum and Ancylostoma braziliense [4]. These

larvae are passed in animal feces, contaminating soil or sand and penetrating human skin upon direct contact. The natural progression of the disease is self-limited. They secrete proteases and hyaluronidases, enabling migration within the epidermis, forming characteristic serpiginous tracts [4]. However, the absence of collagenase prevents penetration beyond the basal layer, limiting migration to the epidermis and preventing visceral involvement. Complications often result from secondary bacterial superinfection including impetiginization, cellulitis, allergic reactions, nonspecific dermatitis, as well as Löffler's syndrome [4,5]. Rarely CLM can present as bullous lesions [5].

Case Presentation

A healthy 2-month-old boy presented to the specialist clinic with a raised, snake-like lesion that had been noticed 2 days prior (Figure 1). It first appeared over the lower back, but his parents observed that the lesion appeared to "crawl" and change direction (Figure 2), although it did not increase in length. Otherwise, he was well - afebrile, not irritable, and without systemic symptoms. He tolerated oral feeding as usual and had normal urine and stool output with no worms observed. The family had no pets, and the child was not allowed to roam in dirt fields. Geographically, the patient resides in West Malaysia and had a history of visiting a recreational park in an urban area. Further history revealed that his feet had been in direct contact with grass at a public park during a brief family outing. The skin lesion was noticed 2 days after this exposure.

Figure 1. A wider view of the back showing the raised, serpiginous lesion.



Figure 2. A closer view of the same lesion showing the raised, pink, track-like eruption with a change in direction.



His birth and developmental history were unremarkable. He was thriving, weighing 5.8 kg at presentation (birth weighs 3.2 kg). His vaccinations were up to date according to the Malaysian immunization schedule. He had not sought medical attention at any other healthcare facility before being presented to our specialist clinic.

On examination, he was cheerful, pink, and not in respiratory distress. A raised, erythematous, serpiginous lesion measuring approximately 2 cm in length was noted over the upper back. No movement of the tract was observed during the examination; however, it had clearly migrated compared to a photograph taken earlier. The rest of the examination was unremarkable. A diagnosis of cutaneous larva migrans was made. Topical albendazole 10% ointment was prescribed at a frequency of three times daily (Figure 3). The lesion resolved after 4 days of treatment (Figure 4). At reassessment two weeks later, he remained well with no recurrence.

Figure 3. An open container of the maroon-coloured, pharmacy-compounded ointment.



Figure 4. A follow-up view of the back showing clear skin, consistent with complete resolution of the lesion.



Discussion

The diagnosis of cutaneous larva migrans (CLM) is largely clinical, relying on a suggestive exposure history and recognition of its characteristic cutaneous manifestations [6]. Among these, a history of lesion migration, often described by caregivers as a "crawling" eruption, represents a key diagnostic clue that should be actively sought, as few dermatological conditions exhibit progressive movement over time. The finding of a pruritic, erythematous, serpiginous tract with gradual advancement on examination further supports the diagnosis. However, clinicians should remain mindful of other conditions that may mimic CLM, including scabies, tinea corporis, and contact dermatitis, particularly when the presentation is atypical or occurs in an unusual age group such as infancy.

Laboratory tests and skin biopsy are generally unnecessary. Although CLM is self-limiting and larvae typically die within 5–6 weeks, treatment is recommended to reduce intense pruritus and prevent secondary bacterial infection [6]. In certain circumstances, the larvae may remain dormant under the subcutaneous tissue, leading to reactivation after a few weeks to months [7].

Systemic agents including oral ivermectin and albendazole showed cure rates exceeding 90% [8]. These systemic agents are effective but may cause adverse effects, and oral albendazole is recommended by the WHO only for children aged ≥12 months [9]. In younger infants, topical therapy is preferred due to the unwanted side effects from systemic agents. Failure of oral treatment with syrup albendazole was documented in an infant less than 12 months old [4]. A retrospective study from Germany demonstrated that topical thiabendazole showed a cure rate of 89.6% although thiabendazole is no longer available, while topical albendazole and ivermectin cure rate are 100% despite limited data available [8]. Topical albendazole 10% applied three times daily for 7–10 days has been

suggested, though data on topical preparations remain limited [10]. Case reports have also documented successful treatment using topical albendazole, including formulations as low as 4% [11-14].

Cutaneous larva migrans (CLM) is frequently reported in children but remain uncommon in infancy [4]. While several cases have been described in infants of crawling age [15-17], our patient was only 2 months old and had not yet achieved mobility. A case report from India documented CLM in a 2-month-old infant, the youngest reported age to date, and suggested prolonged contact with contaminated soil as the probable mode of transmission [18]. A similar exposure history was identified in our patient. This case highlights that CLM should be considered in the differential diagnosis of migratory skin lesions even in very young, non-mobile infants.

Given the very young age of the patient and the unsuitability of oral anthelmintics, our hospital's galenical pharmacy prepared a 10% albendazole paste by mixing three 400mg albendazole tablets with 12 g of Petroleum jelly (Figure 3). The resulting, maroon-colored ointment was applied three times daily and resulted in marked improvement (Figure 4). This pharmacy-prepared topical formulation is inexpensive, accessible, effective, and does not cause any adverse effects.

Conclusions

Cutaneous larva migrans (CLM) can affect individuals of any age, including non-mobile young infants. In Malaysia, the true burden of CLM is likely underestimated because of underreporting and misdiagnosis. A history of migratory skin lesions remains an important diagnostic clue. Given the rarity of CLM in infancy and the limited safety data on oral anti-helminthic therapy in this population, topical albendazole may be a useful treatment option when systemic therapy is contraindicated or undesirable. In our case, a 2-month-old infant achieved complete clinical resolution following topical albendazole therapy. Further studies are needed to establish the efficacy and safety of topical albendazole in young infants. Prevention strategies include avoiding direct contact with potentially contaminated soil and practicing good hygiene.

Glossary

CLM cutaneous larva migrans; WHO World Health Organization

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Consent for publication

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Declaration of competing interests

The authors declare that they have no competing interests.

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