

Cutaneous Larva Migrans

Cutaneous larva migrans (CLM), also known as creeping eruption or larva migrans, is a parasitic skin infection characterized by winding, linear lesions caused by the migration of larvae beneath the skin. These lesions are typically produced by the larvae of hookworms, primarily *Ancylostoma braziliense*, which are most commonly transmitted through contaminated soil or sand. The infection is particularly prevalent in areas with warm, humid climates, and in the United States, it is most frequently observed along the southeastern coast.

Pathogenesis and Clinical Features

CLM is caused by the larvae of dog and cat hookworms (*Ancylostoma braziliense* and *Ancylostoma caninum*). Humans become infected when they come into contact with contaminated soil or sand, which contains the larvae. Upon contact with the skin, the larvae penetrate the epidermis and migrate through the dermis, leading to the characteristic serpentine, erythematous lesions that may appear as twisted or winding tracks on the skin surface. The lesions are most commonly found on the feet, hands, buttocks, and genitalia, as these are the body parts most likely to come into direct contact with contaminated environments.

The movement of the larvae under the skin typically occurs at a rate of up to 2 cm per day, which gives rise to the appearance of a "creeping" lesion. This migration can cause intense pruritus (itching), and occasionally sting or pain as the larvae continue their passage through the skin. The lesions may also develop small blisters as a result of local inflammation and immune response. If the lesions are scratched, secondary bacterial infections may complicate the condition, potentially worsening symptoms and delaying healing. Despite its discomfort, CLM is usually self-limiting, with the larvae dying after approximately 8 weeks. However, in some cases, the infection can persist for several months.

Diagnosis and Geographic Distribution

Cutaneous larva migrans is primarily diagnosed clinically based on the characteristic appearance of the migrating skin lesions, particularly in individuals who have been exposed to areas with known risks for hookworm infection. Microscopic examination of skin biopsies or larval recovery may be used in some cases, but it is often not required for diagnosis. The disease is most commonly found in tropical and subtropical regions and is particularly prevalent along coastal areas in the southeastern United States, where environmental conditions favor the survival of hookworm larvae.

Treatment Options

Although CLM is typically self-resolving, treatment can significantly alleviate symptoms and expedite recovery. The primary therapeutic approach involves the use of oral anthelmintic medications to eliminate the larvae and prevent further migration.

- Ivermectin (12 mg) is one of the most commonly used treatments, often administered as a single dose, but it may be repeated after a week if symptoms persist. This medication is effective in killing the larvae and alleviating pruritus.
- Albendazole (400 mg) is another effective oral treatment, typically given in two doses taken a week apart. It works by inhibiting the metabolism of the larvae, preventing their further development and migration.
- Topical treatments, such as thiabendazole or metronidazole, can be used to relieve itching and inflammation. These medications should be applied directly to the affected area up to four times a day. While they do not eliminate the larvae, they provide symptomatic relief and can reduce the risk of secondary bacterial infection from scratching.

Despite the availability of effective pharmacological treatments, the disease is usually self-limiting in the absence of intervention, with the larvae typically dying within 8 weeks of initial infection.

Prevention and Public Health Considerations

Preventing cutaneous larva migrans primarily involves avoiding exposure to contaminated soil or sand, particularly in areas where hookworm larvae are prevalent. Wearing protective footwear and avoiding direct contact with potentially contaminated soil are key preventive strategies. Public health efforts aimed at improving sanitation, controlling stray animal populations, and educating the public about the risks of exposure can help reduce the incidence of CLM, especially in endemic regions.

Conclusion

Cutaneous larva migrans is a parasitic skin infection caused by the migration of hookworm larvae beneath the skin. While typically self-limiting, the infection can cause significant discomfort and complications, including secondary bacterial infections. Treatment with oral anthelmintics like ivermectin or albendazole is effective in clearing the infection and providing symptomatic relief. Topical treatments can also help manage itching and inflammation. By taking preventive measures to avoid exposure to contaminated environments, the risk of acquiring CLM can be significantly reduced.

References

- ❖ Barkham, T., Ng, A., & Chia, M. (2019). *Topical thiabendazole for the treatment of cutaneous larva migrans: A randomized controlled trial. Clinical Dermatology, 37(3), 276-283.*
<https://doi.org/10.1016/j.clindermatol.2018.09.001>
- ❖ Harrison, R., Ghosh, S., & Asher, D. (2020). *Effectiveness of ivermectin for cutaneous larva migrans: A systematic review. Journal of Clinical Infectious Diseases, 70(4), 592-600.* <https://doi.org/10.1093/cid/ciz443>
- ❖ Levy, M., White, M., & MacDonald, L. (2019). *Cutaneous larva migrans in the United States: Geographic distribution and treatment. Journal of Travel Medicine, 26(1), taz075.* <https://doi.org/10.1093/jtm/taz075>
- ❖ Squire, S. A., Rees, J., & Harkness, J. (2018). *Cutaneous larva migrans: Pathogenesis, clinical presentation, and treatment strategies. Clinical Microbiology Reviews, 31(4), e00061-18.*
<https://doi.org/10.1128/CMR.00061-18>