

PhotoDermDiagnosis

A serpiginous eruption on the foot of a female

Section Editor

Amor Khachemoune, MD CSW,

*Suny Down State Medical Center, Brooklyn,
NY, USA*

Raghavendra Rao, Smita Prabhu

Department of Dermatology, Kasturba Medical College,
Manipal, India.

A 60-year-old female presented with an itchy eruption of 2 days duration on the dorsum of the right foot. It started as a small papule at the intersection between 3rd and 4th toe and subsequently progressed proximally in a serpiginous fashion. She gave a history of walking barefoot in her garden and also had pet dogs and cats at her house. Her comorbid medical conditions included diabetes mellitus, hypertension and ischemic heart disease.

Cutaneous examination revealed slightly raised, serpentine eruption on the dorsum of the right foot. It extended from the 3rd web space up to the mid dorsum, measuring approximately 7 cm in length (**Figure 1**). Her blood counts and stool examination were within normal limits.



Figure 1

What is your diagnosis?

Address for correspondence

Dr. Raghavendra Rao,
Department of Dermatology
Kasturba Medical College, Manipal 576104,
India.
Ph # +91 0820 2922276
Email: raghavrao1@gmail.com

Diagnosis

Cutaneous larva migrans

Discussion

Cutaneous larva migrans (CLM) is also known as creeping eruption, plumber's itch, duck-hunter's itch and sand-worm eruption. Numerous organisms can cause CLM e.g. *Ancylostoma brasiliense*, *A. caninum*, *Uncinaria stenocephala* and *Bubostomum phlebotomum*.¹ *A. brasiliense* (the dog hook worm) and *A. caninum* (the cat hook worm) are the most common causes. Adult hook worms live in the intestine of dogs and cats, and their ova are deposited in the animal faeces. Under favourable conditions of humidity and temperature, the ova hatch into rhabdatiform larvae which moult to form filariform larvae. The filariform larva in the infected soil penetrates the intact, exposed human skin. It lacks the enzymes necessary to penetrate and survive in the deeper dermis; hence, it migrates through the layers of epidermis at a speed of 3-5 cm/day. Most of the larvae are unable to undergo further development in human (accidental host) and die within 2-8 weeks time.²

Though the condition is world-wide in distribution, it is substantially more common in tropical and sub-tropical countries. Activities that increase the risk of infestation include, walking barefoot on a beach, working in the garden and playing in sandpits. The incubation period varies between 1-6 days. The clinical feature of CLM varies from non-specific dermatitis at the site of penetration of the larva to typical creeping eruption. The larva after penetration can lie quiescent for weeks or

immediately begin creeping activity. The characteristic lesion of CLM consists of slightly raised, erythematous thread-like linear or serpentine tracks. The condition is extremely itchy. Large number of larvae may be active at the same time, with the formation of a disorganized series of loops and tracks. The larva usually lies somewhat in front of the head of the track. The wanderings of an individual larva are usually confined to a relatively small area, but exceptionally it could travel much further. Vesiculobullous lesions along the tracks and folliculitis are the other uncommon manifestations.^{3,4} Excoriation and impetiginization of the lesion are common.

Common sites of involvement are feet (interdigital spaces, dorsum, and the medial aspect of the sole), buttocks and hands. Rarely, CLM has been seen in the oral cavity or in the penis.^{5,6} Systemic involvement is not common; eosinophilic enteritis of the small intestine can occur due to the migration of *A. caninum* larva into the gut. Loeffler's syndrome due to CLM has been reported.⁷

CLM is a self-limited dermatosis and the larva usually dies in 2-8 weeks. Skin biopsy is of little help and the diagnosis is mainly clinical. Epiluminescence microscopy is a non-invasive method to detect larva and confirm diagnosis.⁸ Differential diagnosis of CLM includes cercarial dermatitis, migratory myiasis and contact dermatitis. Surgery and cryotherapy are ineffective as the larva is easily missed, being ahead of the visible track. Ivermectin (150-200µg/kg) single dose is the best treatment.

Albendazole (400mg/day) for 3 days and topical thiabendazole (10%) are also useful.

References

1. Vega-Lopez, Hay RJ. Parasitic worms and protozoa. In: Burns T, Breathnach S, Cox N, Griffith C, editors. *Rook's Text book of Dermatology*, 7th edn. Oxford: Blackwell Science; 2004. p.32.1-32.48
2. Padmavathy L, Rao LL. Cutaneous larva migrans- A case report. *Indian J Med Microbiol* 2005; **23**:135-6.
3. Veraldi S, Arancio L. Giant bullous cutaneous larva migrans. *Clin Exp Dermatol* 2006; **31**: 613-4.
4. Veraldi S, Bottini S, Carreca C, Gianotti R. Cutaneous larva migrans with folliculitis: a new clinical presentation of the infestation. *J Eur Acad Dermatol Venereol* 2005; **19**: 628-30.
5. Lopez MA, Zaia AA, de Almeida OP, Scully C. Larva migrans that affect the mouth. *Oral Surg Oral Med Oral Pathol* 1994; **77**: 362-7.
6. Karthikeyan K, Thappa DM, Jeevan Kumar B. Cutaneous larva migrans of the penis. *Sex Trans Infect* 2003; **79**: 500.
7. Del Giudice, Desalvador F, Bernard E, Caumes E, Vandenbos F, Marty P *et al*. Loeffler's syndrome and cutaneous larva migrans: a rare association. *Br J Dermatol* 2002; **147**: 386-7.
8. Eisher E, Themes M, Worret WC. Cutaneous larva migrans detected by epiluminescent microscopy. *Acta Derm Venereol* 1997; **77**: 487-8.

26th PAD and 5th SARAD Conference of Dermatology,

November 15-18, 2007

Lahore, Pakistan

For abstract submission, hotel reservation and other details,

please contact:

Prof. Atif Hasnain Kazmi,

Organizing Chairperson,

Department of Dermatology,

King Edward Medical University,

Lahore 54000, Pakistan.

Ph # +92 42 300 8440840

Fax # +92 42 7353043

E mail: atifkazmi80@yahoo.com

padsarad2007@gmail.com