



## Two Cases of Cutaneous Larva Migrans and a Literature Review of the Condition

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I have read with great interest the article entitled “Cutaneous Larva Migrans”, a case report of a 42-year-old male resident of Northeast Brazil, by Martins-Filho et al.<sup>1</sup>, which was published in the *Balkan Medical Journal* 2024;41:144. I seek to bring to your attention that cutaneous larva migrans (CLM) is not only encountered in tropical countries such as Brazil, but also in non-endemic countries such as Türkiye. Herein, I have presented two cases of CLM that were previously misdiagnosed and a literature review of CLM cases in Türkiye.

Two male patients, aged 43 and 47 years, were admitted to the infectious diseases outpatient clinic with complaints of severe burning, itching, and redness in their feet for 15 days. The itching increased with a rise in temperature and was severe enough to wake the patients from their night sleep. A medical history was elicited, which revealed that the patients worked in the hotel business and frequently traveled to Somalia, where they performed sports activities in the sand with bare feet. Fifteen days after their last visit to Somalia, they noticed lesions on their feet resembling fly bites. After 7 days, the round lesions were replaced by progressive, red, slightly elevated, linear lesions. A physical examination revealed serpiginous, raised, and red cutaneous lesions on the sole and medial aspect of the left foot (Figure 1-3). The patients visited a primary care service, where a preliminary diagnosis of cellulitis was made. They were reportedly prescribed metronidazole (3 x 500 mg/day) and doxycycline (2 x 100 mg/day) for five days. However, the treatment was ineffective. Based on clinical findings and a comprehensive literature search, we diagnosed the patients with CLM. Although a complete blood count did not demonstrate eosinophilia, the total immunoglobulin E level was elevated in the 47-year-old patient. The absence of lung involvement in both patients excluded the diagnosis of Loeffler's syndrome. Thus, we prescribed albendazole (400 mg/day) for 3 days. Ten days later, the

47-year-old patient visited us again with complaints of itching and redness. Thus, we decided to continue albendazole administration for an additional 3 days. At the third weekly checkup, we observed that the lesions and the patients' complaints had significantly regressed.



**FIG. 1.** Characteristic linear, elevated, serpiginous lesions on the plantar aspect of the left foot of the 47-year-old male patient.



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CLM is a parasitic skin infestation often caused by *Ancylostoma* species, most commonly the animal hookworms *Ancylostoma braziliense* (*A. braziliense*) and *Ancylostoma caninum*. The larvae of hookworms are commonly transmitted to humans via direct contact with contaminated soil or sand. Therefore, lesions are most commonly found in areas such as lower extremities that come into

direct contact with surfaces. There is no specific laboratory test for CLM, and a diagnosis is usually made on the basis of a history of recent travel to endemic areas and contact with contaminated soil in addition to clinical signs. Thus, a diagnosis of CLM can often be missed in non-endemic countries, as in the case of our patients, due to the lack of adequate understanding of the disease.



**FIG. 2.** Serpiginous lesions on the medial malleolar, plantar, and dorsal aspects of the left foot of the 47-year-old male patient.



**FIG. 3.** Serpiginous cutaneous lesion on the dorsal aspect of the foot (blue arrow). Dermatitis due to chronic itching (red arrows). Both lesions regressed after treatment.

**TABLE 1.** Summary of Cutaneous Larva Migrans Cases in Türkiye.

Author	Year	Number of patients	Patient age (years), sex	Country of infestation origin	Location of lesions	Eosinophilia
Yavuzer et al. <sup>7</sup>	2010	1	27/F	Brazil	Foot	No
Çalışkan et al. <sup>8</sup>	2016	3	54/M	Türkiye	Abdomen	No
			38/M	Türkiye	Body	No
			23/M	Türkiye	Neck	No
Sönmezer et al. <sup>9</sup>	2017	1	36/M	Brazil	Foot	Yes
Rastgar et al. <sup>10</sup>	2018	1	44/M	Türkiye	Foot	N/A
Gökşin et al. <sup>11</sup>	2020	1	26/M	Thailand	Body	N/A
Can and Yürekli <sup>12</sup>	2022	22	*	Türkiye	Foot, arm, and body	N/A
Our patients	2024	2	43/M	Somalia	Foot	No
			47/M		Foot	No

\*11 male (age range, 23-42 years) and 9 female (age range, 22-52 years) patients were included in the study. F, female; M, male; N/A, not applicable.

Inflammatory skin diseases, bacterial or fungal skin infections, and other parasitic diseases should be considered in the differential diagnosis, which is closely related to the knowledge and experience of a clinician. A study conducted in Germany found that 22% of the 98 patients who were admitted to different centers were misdiagnosed before being diagnosed with CLM. Another study conducted in Canada found that 58% of the 60 patients who were admitted to the Tropical Disease Unit were misdiagnosed.<sup>2,3</sup> In a study conducted in France, 55% of the 64 patients who presented to a primary care institution before visiting specialized hospitals were administered non-targeted treatments such as oral antibiotics, antivirals, and steroids, as seen in our patients.<sup>4</sup>

*A. braziliense* is most commonly found in the tropical coasts of countries located in southeastern United States, Latin America, the Caribbean, Southeast Asia, and Africa.<sup>5</sup> Most of the CLM cases in non-tropical countries have been diagnosed in people visiting an endemic area as a tourist.<sup>6</sup> A summary of CLM cases reported from Türkiye is presented in Table 1.<sup>7-12</sup> The first case of CLM originating from Türkiye was reported by Çalışkan et al.<sup>8</sup> in 2016. It was followed by the largest case series of CLM originating from Türkiye by Can and Yürekli<sup>12</sup>. Both studies originated from the Black Sea region of Türkiye. The recent increase in CLM cases originating from Türkiye is indicative of the impact of climate change-induced increase in temperature and humidity on the epidemiology of diseases. Furthermore, there have been no reports of CLM cases in Türkiye that were related to travel to Somalia (Table 1). Although there are several case reports of CLM originating from Africa, data regarding the prevalence of CLM in Somalia are insufficient.<sup>3</sup>

Although CLM is not a significant public health concern in our country because of its rarity and lack of communicability, it causes significant morbidity due to the prolonged disease process and improper treatment. Currently, with increased travel opportunities, the incidence of rare diseases in our country has increased. Thus, clinical physicians should be aware of tropical diseases.

**Informed Consent:** Written informed consent was obtained from the patients for the publication of these images and their medical data.

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