Widespread Polymorphous Pruritic Eruptions: The Neglected Parasitic Imitator

Dear Editor,

Cutaneous larva migrans is produced by the subcutaneous migration of larvae of animal hookworms (such as *Ancylostoma caninum* and *Ancylostoma braziliense*) or the larval stages of other nematodes such *Gnathostoma* spp., *Pelodera strongyloides*, zoonotic *Strongyloides* spp. and *Spirurina* sp.[1] Hookworm-related cutaneous larva migrans is endemic in several warm and humid countries such as India, Brazil, and the West Indies. A single linear or serpiginous, pruritic, erythematous, and elevated migratory tract, particularly affecting the feet, buttocks, or thighs, is the most common presentation.[2,3] Although *Sarcoptes scabiei* is the common parasitic imitator in the tropics and subtropics, the larvae of animal nematodes are neglected parasitic imitators that can present with widespread pruritic polymorphous eruptions. These larvae can cause atypical morphological presentations or affect atypical sites and can involve extensive areas.

We report six patients [Figure 1-6] from south India with cutaneous larva migrans who presented with extensive pruritic polymorphous lesions. The details of the patients are listed in Table 1. The presence of serpiginous tracks (marked in arrows in photographs) clinched the diagnosis in all the patients. The duration of symptoms ranged from 1 to 4 weeks. Two patients had received treatment for scabies. All patients had peripheral blood eosinophilia. The patients were treated with 400 mg daily dose of albendazole for 3–7 days, topical mupirocin ointment application over the eroded areas, and oral antihistamines. Four patients followed up after one week and reported resolution of symptoms.

The photographs in our case series reflect the varied clinical presentations of widespread cutaneous larva migrans. The classical erythematous migratory tracts may be few in number or apparent only under tangential lighting [Figure 3a]. They may be masked by excoriations,

Figure 1: Crusted plaques, papules, excoriations, and serpiginous tracts (arrow)

Figure 2: Papules, folliculitis, eczematous plaques, excoriations, and serpiginous tracts (arrow)

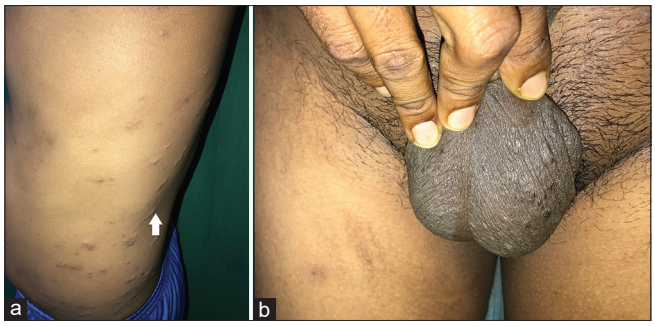

Figure 3: (a and b) Erythematous and hyperpigmented papules, plaques, excoriations, serpiginous tracts, (arrow), scrotal papules, nodules, and excoriations

Figure 5: Hyperpigmented papules, folliculitis, excoriations, serpiginous tract (arrow)

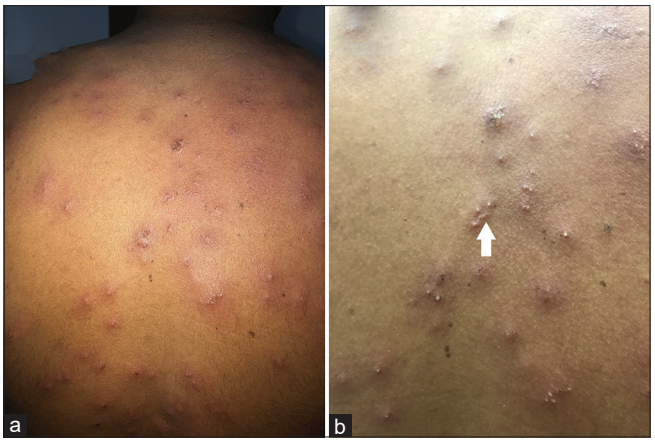

Figure 4: (a and b) Folliculitis, erythematous papules and plaques, excoriations, eczematous plaques, and serpiginous tracts (arrow)

Figure 6: Hyperpigmented papules and plaques, excoriations, and serpiginous tracts (arrow)

eczematization, thick crusts, and secondary bacterial infections and may be easily overlooked. Erythema may be less prominent in darker skin types. Similar to scabies, staphylococcal or streptococcal superinfections may occur with the possibility of poststreptococcal glomerulonephritis in long-standing lesions.[3]

Hookworm folliculitis [Figure 4b] is a rare manifestation of cutaneous larva migrans. It presents with erythematous follicular papules and pustules that may be excoriated. Histopathological examination reveals the larvae in the follicular canal, stratum corneum, or the dermis along with an infiltrate of eosinophils.[4] The larvae do not have collagenase to penetrate the basement membrane but can enter the skin with the help of proteases and through abrasions and hair follicles.[5] The clinical manifestations may vary depending on the type of hookworm. *Ancylostoma braziliense* larvae produces long-lasting serpiginous lesions, whereas *Ancylostoma caninum* produces transient follicular and papulopustular lesions.[6] Vesiculobullous lesions and erythema multiforme are other rare manifestations.

The feet, buttocks, and thighs are commonly affected in tourists. However, in endemic areas, the tracks are common on the trunk and legs. Atypical sites such as scalp, genitalia, and oral mucosa may also be affected. The pruritus is often intense and can disrupt sleep.[3] Extensive lesions as in our cases may be due to the massive contamination of the soil with parasitic larvae and prolonged duration

Table 1: Clinical characteristics of patients with extensive cutaneous larva migrans

Age (in years)	Sex	Occupation	Site	Clinical features
41	Male	Manual laborer (Sand mining)	Trunk, thighs and gluteal region	Crusted plaques, papules, excoriations, migratory (a few mm per day) serpiginous tracts.
54	Male	Manual laborer (Sand mining)	Back, abdomen , gluteal region, arms, forearm and thighs	Folliculitis, papules, eczematous plaques, excoriations, migratory serpiginous tracts
23	Male	Student	Back, abdomen, gluteal region, and genitalia	Erythematous and hyperpigmented papules, plaques, excoriations, migratory serpiginous tracts, scrotal papules, nodules and excoriations
38	Male	Manual laborer (construction)	Back	Folliculitis, erythematous papules and plaques, excoriations, eczematous plaques, migratory serpiginous tracts.
45	Male	Manual laborer (construction)	Back and gluteal region	Hyperpigmented papules, plaques, folliculitis, excoriations, migratory serpiginous tracts
47	Female	Manual laborer (construction)	Chest and abdomen	Hyperpigmented papules and plaques, excoriations, migratory serpiginous tracts

of contact. These manifestations are more likely in India where the incidence of hookworm infections is high.[7] The polymorphous lesions may mimic several other dermatoses such as scabies, dermatitis herpetiformis, atopic dermatitis, bacterial folliculitis, dermatophytosis, urticaria, and contact dermatitis. Extensive cutaneous larva migrans mimicking multimetameric herpes zoster have also been reported.[8] The differential diagnoses for migratory linear or serpiginous tracts (creeping eruption) includes dirofilariasis, schistosomiasis (cercarial dermatitis), onchocerciasis, *Strongyloides stercoralis* (larva currens), *Fasciola gigantica*, migratory myiasis, scabies, dracontiasis, loiasis, and creeping hair.[1,3]

Systemic complications of animal hookworm larvae include eosinophilic pneumonitis, myositis, eosinophilic enteritis, and diffuse unilateral subacute neuroretinitis.[6] Cutaneous larva migrans is selflimiting. However, treatment is often initiated in view of the disabling pruritus and the possibility of secondary bacterial infections. Oral ivermectin or albendazole for three or more days is recommended. Topical thiabendazole may be used when the lesions are few in number but is not recommended in widespread lesions and hookworm folliculitis.[3,9]

The disease burden remains high in several endemic areas and thus, cutaneous larva migrans should be excluded in patients with pruritic polymorphous eruptions in endemic areas and in returned travelers.

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Conflicts of interest

There are no conflicts of interest.

Gowtham Saravanan, Hima Gopinath[1], Kaliaperumal Karthikeyan, Valeti Meghana

Sri Manakula Vinayagar Medical College and Hospital, Madagadipet, Kalitheerthalkuppam, Puducherry, [1]AIIMS Mangalagiri, Mangalagiri, Guntur District, Andhra Pradesh, India

Address for correspondence:
Dr. Hima Gopinath,
AIIMS Mangalagiri, Mangalagiri, Guntur - 522503, Andhra Pradesh, India.
E-mail: hima36@gmail.com

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