

Cutaneous larva migrans with pulmonary involvement

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Accepted 22 December 2017

DESCRIPTION

After returning from a Caribbean cruise, a 52-year-old woman spent an afternoon sitting on a sandy beach in Martinique with her husband. An initial burning sensation over her buttocks was followed the next day by an intensely pruritic eruption with 'red pinprick marks'. This was unsuccessfully treated on the cruise ship with antibiotics, antifungal agents, as well as topical and intramuscular steroids. Examination on day 10 revealed a serpiginous rash over her buttocks with a large number of discrete papular lesions (figure 1). The patient's husband was noted to be itching and examination revealed a rash with equivalent distribution and morphology (figure 2). A clinical diagnosis of cutaneous larva migrans was made.

Both patients were treated with a single dose of oral ivermectin 200 mcg/kg, together with emollients and antihistamines for pruritus. Our female patient presented to the emergency department 5 days later with dry cough, shortness of breath and pleuritic chest pain. Chest radiograph showed bilateral nodular consolidation, and CT Pulmonary Angiogram revealed diffuse ground-glass nodules consistent with hypersensitivity pneumonitis. Eosinophils were normal ($0.25 \times 10^9/L$). Repeat doses of ivermectin 200 mcg/kg were given on days 7 and 15, which was followed by complete resolution of dermatological and radiographic findings. The patient's husband also developed a dry cough and subsequent chest radiograph found a ground-glass opacity which resolved, along with skin changes, following a second dose of ivermectin.



Figure 2 Rash with identical morphology affecting the same region of patient's partner.

Cutaneous larva migrans is a dermatological condition caused by parasitic hookworm infection, most commonly *Ancylostoma braziliense* in the Caribbean and the Americas.¹ The hookworm larvae are excreted in the faeces of the infected animal host (usually dog or cat) onto sandy beaches or moist soil, where they can penetrate into the epidermis of human skin on contact. Initial symptoms typically include localised burning pruritus at the site of entry followed by the appearance of a slowly creeping, serpiginous rash over the next days to weeks. The palpable, twisting lesions are approximately 2 mm wide and typically spread 10–50 mm from the site of entry, which is usually the soles of the feet but may be any body site.

The condition is self-limiting as hookworm larvae are unable to penetrate the basement membrane; however, treatment may be required in symptomatic patients. A single dose of oral ivermectin at a dose of 200 mcg/kg, as given in these cases, may be used as first-line treatment.² In cases of persistence, a second or third dose may be given before considering alternative oral anthelmintics such as albendazole. Antihistamines and topical corticosteroids can be prescribed to provide symptomatic relief.

Finally, there are rare reports of an association of parasitic infections with patchy pulmonary infiltrates and peripheral eosinophilia, in a condition known as Loeffler's syndrome.³ This is thought to be a hypersensitivity reaction to the larvae. In both our cases, there was pulmonary involvement without eosinophilia, and symptoms and imaging resolved quickly following treatment. We therefore hypothesise that their lung disease was either due to atypical Loeffler's syndrome or otherwise due to direct pulmonary infiltration by the larvae.



Figure 1 Florid, serpiginous rash located on the buttock region of the patient.



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To cite: Maslin D, Wallace M.
BMJ Case Rep Published
Online First: [please
include Day Month Year].
doi:10.1136/bcr-2017-
223508

Learning points

- ▶ Cutaneous larva migrans may be seen in travellers returning from tropical destinations.
- ▶ While the appearance of the rash is pathognomonic, diagnosis is often delayed due to lack of familiarity with the condition.
- ▶ Pulmonary involvement is rare, but should be considered in symptomatic patients (eg, cough, dyspnoea and wheeze) with cutaneous larva migrans.

Contributors DM: clinical case management, literature review and writing of case report. MW: clinical case management, case report review and finalisation.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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