

## Clinical picture

# Prolonged incubation period of Hookworm-related cutaneous larva migrans

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A 58-year-old woman presented with a 10-day history of a pruritic rash and pain in the web space between the right first and second toe, extending laterally along the dorsal surface of her foot (Figure 1).

Three months before symptom onset she had walked bare-foot on the beach in Grenada. She had no other relevant history.



**Figure 1.** Typical serpiginous lesion of cutaneous larva migrans

Physical examination revealed a serpiginous erythematous tract on the dorsal surface of the foot. She was diagnosed with Hookworm-related cutaneous larva migrans (HrCLM). Oral albendazole 400 mg once daily for 3 days was initiated. The pruritus decreased significantly within 2 days and completely by Day 5. The rash resolved over 2 weeks.

HrCLM results from skin penetration of dog or cat hookworms, *Ancylostoma braziliense* or *Ancylostoma caninum*. HrCLM is endemic in the developing world, especially in Brazil, India and the Caribbean.<sup>1</sup> Since humans are incidental hosts, larvae are confined to the skin and unable to complete their lifecycle.<sup>1</sup>

The diagnosis of HrCLM is made clinically, based on the appearance of the characteristic serpiginous lesion on the skin, intense itching and previous travel history including direct exposure of the skin to contaminated soil or sand.<sup>1</sup> Eosinophilia is unusual. Although the illness is self-limited, treatment with a single dose of ivermectin (200 µg/kg orally) or albendazole (400–800 mg/d orally for 3 days), effectively kills the migrating larvae and relieves the symptoms, usually within 1 week.<sup>1</sup>

Our case is unusual because the mean incubation period for HrCLM from return to onset of lesions is generally 5–15 days with a range of 0–120 days.<sup>1</sup> Only two previous case reports have documented incubation periods up to 5 months.<sup>2,3</sup> The cause of variability in incubation period remains unclear; however, it has been postulated that as yet undetermined host factors may play a role.<sup>3</sup> Also, helminth strain differences might be possible.<sup>3</sup> Further investigations are needed to understand this phenomenon.

Although the intense pruritus and characteristic lesion usually appear within 1 week, larvae may lie dormant for many months after infection leading to clinical symptoms long after return. Those presenting soon after return from travel are likely to make the linkage between travel and illness. However, a

prolonged incubation period may make the connection less apparent; therefore, an astute clinician will need to take a travel history to arrive at the correct diagnosis.

It is unclear whether the variable incubation periods of HrCLM depend on parasite or other host factors. Travellers to endemic areas should be advised to avoid skin contact with soil and use footwear when walking on the beach.

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### References

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