Netherlands
The Journal of Medicine

PHOTO QUIZ

A worm emerging from the foot

D.A. Korevaar*, B.J. Visser

Academic Medical Centre, University of Amsterdam, Amsterdam, the Netherlands,
*corresponding author. tel: +31 (0)642993008, e-mail: d.a.korevaar@amc.uva.nl

CASE REPORT

A 34-year-old man presented to a Sudanese clinic with a one-week history of a hot, painful sensation under the skin of the medial side of his left ankle. Three days before, he had noticed a small, painful blister under the medial malleolus. Since then, there was increasing swelling and pruritus around the blister. In addition, he had developed a slight fever with dizziness and nausea. On physical examination, it was noted that the blister had burst and a worm was emerging (*figure 1*).

Figure 1. *Guinea worm emerging from the foot (photo by Dr. A. Tayeh)*

WHAT IS YOUR DIAGNOSIS?

See page 379 for the answer to this photo quiz.

ANSWER TO PHOTO QUIZ (PAGE 375)

A WORM EMERGING FROM THE FOOT

DIAGNOSIS

This classical finding prompted the diagnosis of dracunculiasis, or 'Guinea worm disease'.

Dracunculiasis is an entirely preventable tropical waterborne parasitic disease caused by the nematode *Dracunculiasis medinensis*. It is transmitted by the ingestion of water contaminated with copepods (water fleas) that are infected with larvae of the worm. In the stomach, the larvae penetrate through the digestive wall. While the male worms die within months, the females may grow up to 1 meter (3 feet) in length.[1] Symptoms start approximately one year after the initial infection when a worm emerges from the skin. Immersing the affected limbs in water creates the opportunity for the worm to expel millions of larvae. These are ingested by copepods and the cycle starts all over again. The social impact of dracunculiasis is mainly due to the temporary disability it causes among patients. In endemic areas, the disease is a considerable public health problem. It affects the poorest populations, often living in rural and inaccessible areas. Since the disease mainly affects the most productive people, it has significant impact on agricultural productivity and school attendance.[2] However, over the past decades, enormous progress has been made towards the global eradication of the disease and the overall number of cases has been reduced by more than 99% since 1986.[3]

The patient was treated by gradually pulling the worm out manually, winding it up onto a stick a few inches each day for seven weeks. During this period, the foot was bandaged daily. Although this does not prevent the release of larvae, it does discourage the patient from immersing his foot in water that is also used by others.[4] In addition, topical antibiotics were applied to the wound to prevent secondary bacterial infections.

REFERENCES

1. Greenaway C. Dracunculiasis (guinea worm disease). CMAJ. 2004;170:495-500.
2. Visser BJ. Dracunculiasis eradication – Finishing the job before surprises arise. Asian Pac J Trop Med. 2012;5:505-10.
3. Cairncross S, Tayeh A, Korkor AS. Why is dracunculiasis eradication taking so long? Trends Parasitol. 2012;28:225-30.
4. Cairncross S, Muller R, Zagaria N. Dracunculiasis (Guinea Worm Disease) Eradication Initiative. Clin Microbiol Rev. 2002;15:223-46.