

## Images in Clinical Tropical Medicine

### A 24-year-old Ethiopian Farmer with Burning Feet

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**Abstract.** Podoconiosis is a non-infectious tropical disease caused by exposure of bare feet to irritant alkalic clay soils. This causes an asymmetrical swelling of the feet and lower limbs due to lymphoedema. This swelling is called “elephantiasis” and may lead to severe disability of the patient. It is found in areas of tropical Africa, Central and South America and north-west India, where such soils coexist with high altitude, high seasonal rainfall and low income. Social stigmatization of people with the disease is widespread and economic losses are enormous. Podoconiosis is unique in being an entirely preventable non-communicable tropical disease. However, so far it has received little attention from health care policy makers.

A 24-year-old farmer presented to a clinic in north-west Ethiopia (Amhara region) with an 8-year history of progressive edema, moss-like papillomas, hard nodules, and hyperkeratosis involving his feet (Figure 1), which were now increasingly itching and burning. An *in vitro* immunodiagnostic assay for the detection of *Wucheria bancrofti* was negative. The clinical presentation of elephantiasis, in the absence of filarial worms, prompted the diagnosis of podoconiosis, also known as “mossy foot disease” or “endemic non-filarial elephantiasis.” Podoconiosis affects 4 million people worldwide and is endemic in areas of tropical Africa, Central and South America, and India. It is associated with living in areas with high altitude and high seasonal rainfall, and is caused by exposure of bare feet to alkaline volcanic clay soils.<sup>1</sup> Mineral particles are thought to penetrate the skin, causing an inflammatory reaction leading to lymphedema. Clinically, podoconiosis can be distinguished from filarial elephantiasis because it is generally bilateral, it rarely involves the upper leg or groin, and it occurs at altitudes above 5,000 ft, which exceeds the level at which filariasis is transmitted. Social stigma of patients is widespread and economic development is threatened because it mainly affects the most productive people.<sup>2</sup> Podoconiosis is preventable with low-cost measures such as shoe wearing and foot hygiene. Treatment is limited to bandaging, hosiery, elevation, and surgery in selected cases.

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FIGURE 1. The feet of the patient shows edema, moss-like papillomas, hard nodules and hyperkeratosis.

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