



Policy | Brief

Look-see Neglected Tropical Diseases: Shout for Podoconiosis

Summary

Podoconiosis is a non-filarial elephantiasis that is caused by exposure of bare feet to volcanic derived soil particles. Podoconiosis is common in Ethiopia with more than 345 endemic disease-related districts. In areas with irritant soil, the prevalence of podoconiosis is about 5%. Podoconiosis is a disease with simple and cheap intervention but affecting a prosperous age group that has a socio-economic significance.

Most of the support for disease management has been provided by Non-Governmental Organizations (NGO), with no government supported care service. NGOs have not had consistent funding; hence podoconiosis care is often insufficient. Podoconiosis care integration, including rehabilitation centers should ultimately be integrated with other governmental health services, particularly in high burden regions of the country. As a major first step, we propose the organization of a stakeholder meeting among policy makers, NGO and other relevant associations, and experience researchers and health care providers to discuss the best way forward.

Brief Background of Podoconiosis

Non-filarial Elephantiasis or podoconiosis is a non-communicable, geochemical disease caused by the absorption of ultrafine silica particles from the soil through the skin of the feet (1). Due to its relevance to public health, the World Health Organization (WHO) has added Podoconiosis to the list of neglected tropical diseases (NTDs). Podoconiosis predominantly affects barefoot subsistence farmers in areas with red volcanic soil. The disorder is characterized by bilateral swelling of the lower legs with mossy and nodular modifications in the skin, and causes substantial disability (2). Podoconiosis is commonly spread in several countries on three continents: Africa, South America and Asia. [1/2].

At least ten African countries have highland regions where the disease is endemic, including Ethiopia, which has the highest number of patients with Podoconiosis (3). The disease is predominantly found in regions of tropical Africa where fine reddish-brown soils are prevalent and in areas of high altitude (>1250 m), modest average temperature (20°C) and summer season annual rainfall (>1000 mm) (4). This irritant clay soil is particularly fertile and attracts farm it (5). The SNNP had the highest proportion of people with podoconiosis (39%), while Oromia and Amhara Regional States had 32 percent and 29 percent, respectively. Tigray and Beneshangul Gumuz Regional States added slightly to the overall number of citizens with podoconiosis, but the other regions had almost no cases (6).



Figure 1 Patients with podoconiosis

Important Findings

Podoconiosis is common in Ethiopia with more than 345 endemic disease-related woredas; Oromia has 144, Southern Nations, Nationalities, and Peoples [SNNP] has 128; Amhara has 64; Benishangul Gumuz has four; Tigray has four; and Somali Regional State has one woreda (6). In areas with irritant soil, the prevalence of podoconiosis is about 5%-10% (7). Other studies have estimated as many as 1.6 million people living with Podoconiosis in Ethiopia with 35 million people at risk of contracting a disease in the state (8). Most studies revealed the prevalence was even higher among those aged 15–64 years who were economically active even one study confirmed 64% of Podoconiosis cases are in the economically productive age group (7,9).

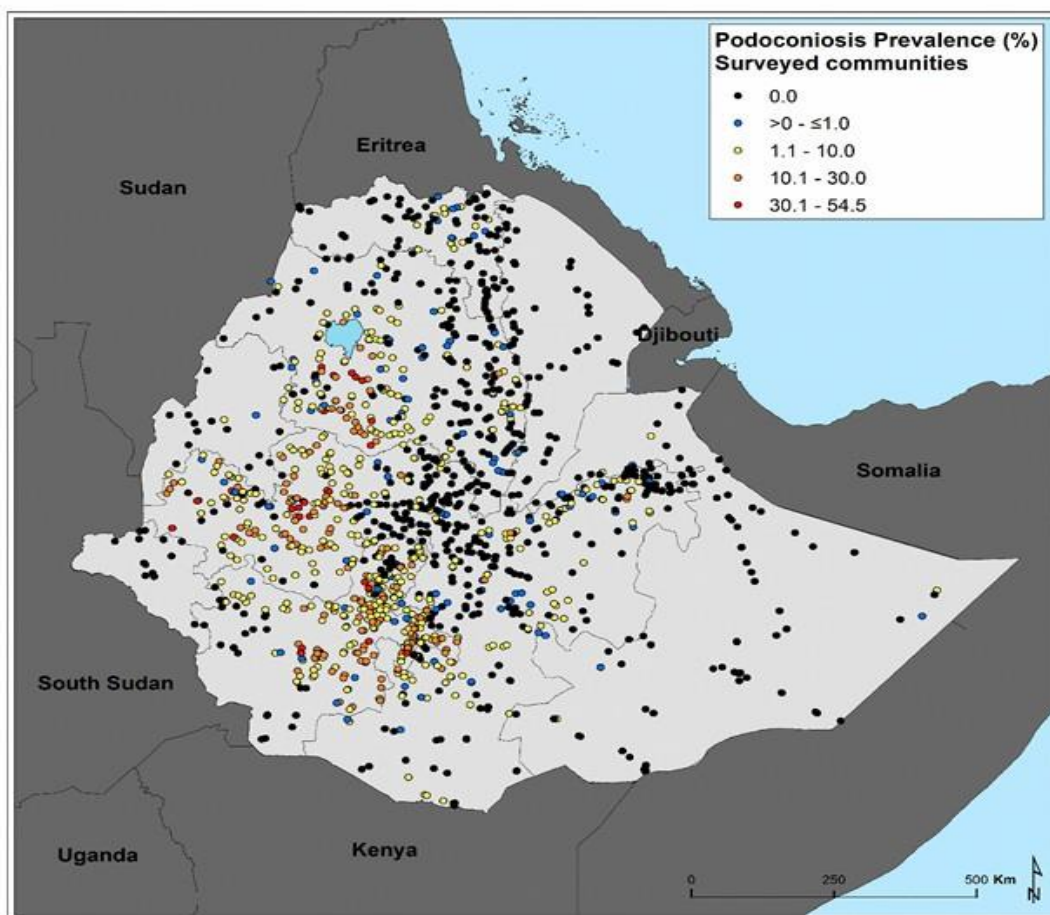


Figure 2: Distribution of 1,442 communities surveyed and prevalence of podoconiosis among adults (≥15 years)

Podoconiosis' patients lose approximately half of their total productive workdays. Podoconiosis' direct and productivity costs have been estimated at US\$16 million per year in a population of 1.5 million people, imposing an economic burden of \$208 million per year in Ethiopia (10, 11). Although simple and effective treatment strategies are available in Ethiopia, patients with Podoconiosis tend to discontinue their treatment (12).

Studies have shown that some of the factors for discontinuation were remoteness from treatment sites, stigma and misconceptions about the treatment (13). Moreover, in Ethiopia patients with Podoconiosis suffer from depression, lower quality of life, and cite stigmatizing behavior from health care practitioners (14). The public in general and podoconiosis affected communities in particular have no or little awareness about the cause, and management of the disease, believing rather in myths and taboos where the stigma and discrimination is rooted (15).

Policy Implications

The majority of Podoconiosis care and services are provided by non-governmental organizations; hence the service has become inconsistent. Importantly:

- The age distribution of cases shows that most of the cases belonged to the productive age group.
- The socio-economic impact of the disease is high. Annual loss of up to US\$213.2 million due to the disease and its complication has been estimated.
- The diseases in which low cost prevention is a simple but effective solution of a clinical problem with high social and economic impact.

Policy/Intervention

We outline below both short-term and long-term interventions.

Short Term Intervention

- The key short-term intervention should be the organization of a symposium or conference among multiple stakeholders in the country, including current involved NGO, experienced researchers and health professionals, and appropriate representatives from the Ministry of Health. The goals of such a meeting would be to raise awareness of the burden of the disease, the logistics involved in patient management, and the issues involved in a government supported patient management, and ultimately a more detailed interventional plan, starting with those regions of the country with the highest burden.

Long term Intervention

- There is no single solution to combat Podoconiosis as a disease and its complication, but we outline multiple interventions below which can be considered from the ideal, long-term perspective.

1. Behavioral change communication (BCC)

BCC is an essential part of a comprehensive program that includes medical, surgical, social and psychological and commodities (shoes, soap and water).

1.1 Increase awareness

Different modalities can be implemented to increase awareness on the disease to reduce stigma and discrimination.

- **“Shoe wearing day celebration”**

The ministry might assign a day to celebrate shoe wearing throughout the country especially in geographic area with high disease prevalence. This would include celebrations, events, and advocacy campaigns with assigned public figures. In addition, in collaboration with the private sector, volunteers working on shoe manufacturing can make available the shoe in the high burden areas at low expense, with possible additional government support.

- **Alleviate stigma and discrimination**

The suggested mitigation of stigma and discrimination scheme would include:

- a) Create awareness and contribution to the elimination of stigma and discrimination beside their effect on the response to the disease.
- b) Advocate for a multi-faceted national approach to stigma and discrimination. A response that uses a range of approaches will have the greatest impact, including social mobilization, participatory education, and interaction between people affected by podoconiosis and key audiences and media campaigns.

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