

A Community-Based Podiatric Intervention for Plantar Fissure Prevention in Leprosy Patients with Anaesthesia: A Randomised Controlled Trial in Rural Bihar

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| Abstract

Plantar fissures are a frequent and serious complication for leprosy patients with plantar anaesthesia, often leading to secondary infection and ulceration. In resource-limited settings such as rural Bihar, structured preventive foot care is frequently unavailable. This study evaluated the efficacy of a community-based podiatric intervention for preventing plantar fissures in leprosy patients with anaesthesia. A single-blind, randomised controlled trial was conducted. Participants with plantar anaesthesia were randomly allocated to an intervention group (n=112) or a control group (n=115). The intervention group received a structured programme of regular foot inspections, basic podiatric care (callus filing), and daily application of a urea-based emollient, delivered by trained community health workers. The control group received standard care advice. The primary outcome was the incidence of new plantar fissures. The intervention significantly reduced fissure incidence. The proportion of participants developing one or more new fissures was 18.8% in the intervention group compared to 52.2% in the control group ($p < 0.001$). A simple, community-based podiatric and emollient programme is effective for preventing plantar fissures among leprosy patients with plantar anaesthesia in a rural setting. This model of task-shifting basic podiatric care to community health workers should be integrated into national leprosy control programmes in comparable resource-poor regions. Further

research should assess long-term sustainability and cost-effectiveness. leprosy, plantar anaesthesia, foot fissures, podiatry, emollient, community health workers, prevention, randomised controlled trial This study provides evidence for a low-cost, scalable intervention to prevent a major cause of morbidity in this vulnerable population.
