



Rehabilitation of leprosy-affected people: An overview

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Abstract Leprosy is mainly a disease of the skin and nerves. The involvement of nerves may lead to impairments that have, contributed to the fact that leprosy is often still seen as a disease to be feared. In non-leprosy-endemic Western countries, beliefs continue to prevail about the inevitability of deformities and the lack of a cure. I review the pathogenesis of deformity and to present a discourse on how deformities can, to a very large extent, be prevented and corrected.

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Terminology

In this paper, the terminology of the World Health Organization on International Classification of Function (ICF) will be adopted¹ (Table 1).

Impairments are problems in body function or structure, such as a significant deviation or loss. Impairments as a result of leprosy can include vision loss, paralysis, joint contractures, and ulcers.

Activity limitations are difficulties an individual may experience in executing activities. Leprosy-affected people may, for example, not be able to eat or dress in a culturally acceptable manner.

Participation problems are problems an individual may experience in maintaining involvement in day-to-day situations. Leprosy-affected people may, not be allowed to go to school, to work, or to participate in community activities.

Disability is the umbrella term for impairments, activity limitations, and participation restrictions. For the latter item, rather than *restriction*, the preferred term *participation problem* is increasingly used.

Deformity is defined as a structural–anatomic deviation from the norm, such as absorption or contracture.

Leprosy-affected people is the preferred term used in this paper and may refer to patients undergoing treatment and persons released from multidrug therapy (MDT—medical treatment), who still experience the primary and secondary consequences of nerve function impairment (NFI) and may need continued attention and care (Figure 1).

Etiology of impairments and deformity

Most impairments and deformities can be attributed to transient or permanent loss of nerve function. There are a number of noticeable, predominantly facial impairments and deformities, such as the collapse of the nose. These impairments and deformities can be prevented by timely

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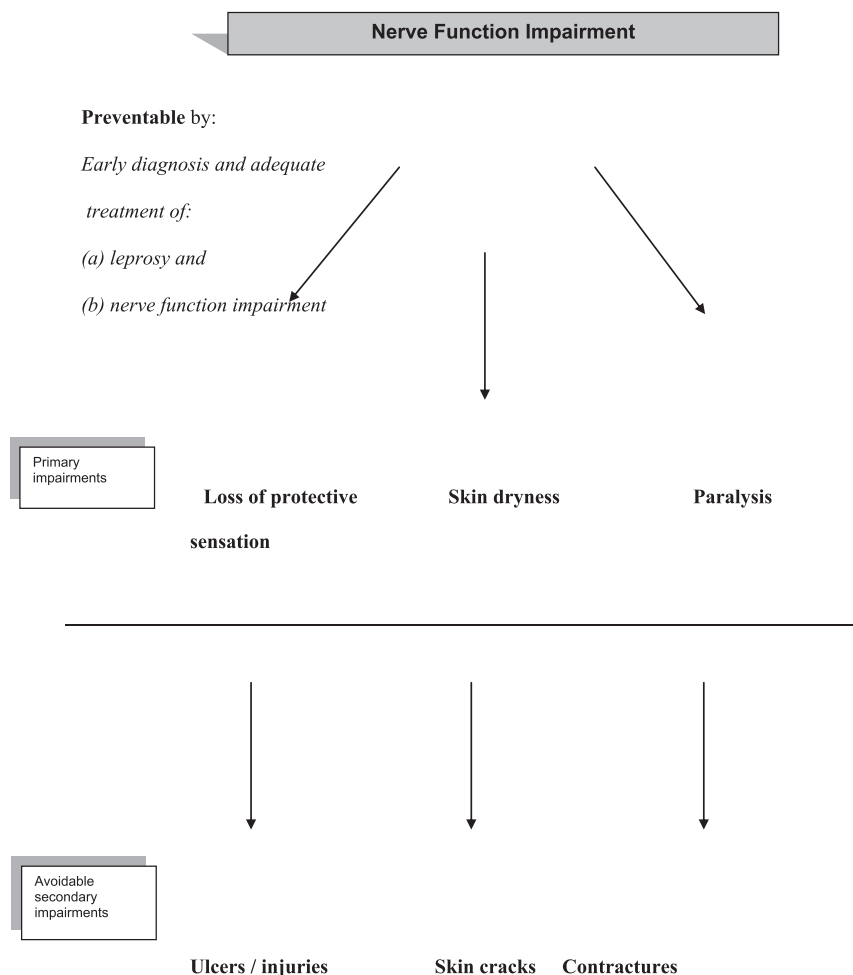


Fig. 1 Primary and secondary impairments due to nerve function loss.

diagnosis and adequate treatment. The consequences of NFI can often be prevented by early diagnosis and adequate treatment of leprosy neuropathy after diagnosis.²

Nerve function assessment and evaluation

Regular nerve function assessment (NFA) is an important tool in the prevention of permanent NFI. Patients may already present with NFI at time of diagnosis. If the infection is of relatively short duration (less than 6 months), adequate treatment may reverse any nerve impairment. Some patients may develop NFI while on treatment and others may develop NFI after MDT.

Most leprosy programs now undertake a baseline NFA at the time of diagnosis. It is recommended that NFA be repeated at regular, monthly intervals after diagnosis, although

it may need to be repeated more frequently if patients are undergoing a specific drug treatment for neuropathy.³

Nerve function assessment: Voluntary muscle testing and monofilament testing

Basic manual muscle strength tests are used to assess the integrity of motor fiber function. Likewise, tests for touch perception are used to assess and monitor the function of sensory fibers. The best test to assess sensory function makes use of monofilaments. It should be kept in mind that significant subclinical decrease in nerve function may be present before NFI can be objectively assessed with voluntary muscle testing and monofilament testing.

In an ongoing, prospective, double-blind, randomized, placebo-controlled trial, patients with subclinical NFI are

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