



WORLD DISEASE DAY FOCUS

Leprosy

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World Leprosy Day

World Leprosy Day is celebrated on the last Sunday of January with the aim of bringing the world's attention to leprosy sufferers made to live in leprosaria in the past. Advances in medical sciences have transformed leprosy from an incurable disease of unknown cause to one easily treated with drugs. Following the success of World Health Organisation's Multi Drug Therapy (MDT) Regime for the Elimination of Leprosy Programme, leprosy has ceased to be a public health problem in most countries.

What Is The Cause Of Leprosy

Leprosy is caused by *Mycobacterium leprae*, a bacillus which only lives and multiplies in human and armadillo in nature. Except for a few accidental transmissions from armadillo, all recorded cases are believed to be infected by an untreated human case. Transmission is most effective by droplets via the upper respiratory tract, and less so via broken skin. Insect bites and passive transfer through objects have not been proven. 90% of human is naturally protected and only 10% of the population is capable of developing the disease when faced with the bacillus.

Leprosy bacillus preferentially grows in the skin and nerve, and cleverly avoids killing the victims. Two types of tissue damage result: (i) The basic "granulomatous" one causing gradual destruction of skin and nerve with very little symptoms; and (ii) The "Reactional" states causing rapid destruction and manifest as pain, swelling and paralysis of sudden onset.

The Disease And Its Diagnosis

Leprosy is an easy disease to diagnose when one remembers that it causes skin and nerve lesions simultaneously. The skin lesions vary widely in appearance from a single hypopigmented patch to red raised swelling of any size and extent. Typically, patient does not complain of itch or pain and problem has been present for many months before seeking treatment. Detailed questioning and examination with pin prick may reveal loss of sense of pain, and features of peripheral nerve damages like nerve enlargement, muscle weakness and wasting. More subtle presentation are wounds from burn and injuries from daily activities not noticed and casually dismissed by the patient. Where facilities are available, a slit skin smear test of the skin demonstrates *Mycobacterium leprae* which confirms the diagnosis. Diagnosis of leprosy carries serious clinical and social implications, and confirmation by histological examination following a biopsy should be mandatory.

Though most leprosy patients do not complain of symptoms, sudden onset of pain swelling and paralysis can be the reason for seeking medical attention when "Reactional" states occur. Reactional states result from complicated changes in the state of balance between patient's immune system and the bacillus.

Treatment

Rifampicin, Clofazamine and Dapsone are the three drugs used in Multi Drug Therapy (MDT) Regime recommended by the World Health Organisation. With treatment duration of 6-24 months, they effectively arrest the disease and render the patient non-infectious. The newer combination regimes using Rifampicin, Minocycline and Ofloxacin further reduce the therapy duration to 6-12 weeks.

