

## A neglected disease – Lymphatic filariasis now targeted for elimination in India

As part of a global effort, India is seeking to put lymphatic filariasis (LF) on the list of eliminated diseases before twenty years from now, or much sooner, if possible. More than one billion people in eighty countries are affected, with at least 120 million globally who already have LF infections. Asia carries 60% of the global disease burden afflicting people in eight Asian countries, with India being the most endemic and holding 70% of the Asian burden.

This disease has been documented in ancient texts of India and even today poses a serious public-health problem in the country. Known as elephantiasis, LF is widespread in Bihar, Uttar Pradesh and many central and southern parts of India. The external manifestations of elephantiasis and lymphoedema include enlargement of the entire leg and arm. Internally, damage can occur to the lymphatic circulation system and the kidneys. LF mostly occurs in rural areas and in slum clusters in an urban environment. LF hangs heavy as a tremendous social burden, as it incapacitates the afflicted and is associated with social stigmatization.

LF, caused by thread-like, parasitic filarial worms *Wuchereria bancrofti* or *Brugia malayi* lodges in the human lymphatic system producing millions of microfilariae that circulate in the blood during the worm's lifespan of 4–6 years. Mosquito bites help to transmit the disease. In order to halt the transmission of the disease and prevent its spread, especially in endemic communities, drug treatment is required to get rid of the microfilariae from the blood of infected individuals.

Elimination of LF therefore poses a challenge to the disease-affected coun-

tries. Recently, the second meeting of the 'Global Alliance for the Elimination of Lymphatic Filariasis (GAELF)' was held between 2 and 3 May 2002 in New Delhi. The GAELF is a partnership forum under the aegis of the World Health Organization (WHO), Geneva. The first meeting was held in Spain in 2000, where a need for closer collaboration among partners in the elimination of the disease by 2020 had been emphasized. The partners are the WHO, Ministries of Health of the LF-endemic countries, organizations in the private and public sector and academia.

The strategy for elimination of LF is two-pronged. First, to interrupt transmission by first identifying and mapping the endemic areas and then mass administration of preventive treatment to the population at risk. For this, in most countries the programme would be based on once-yearly dispensation of single doses of two drugs given together. These drugs are albendazole plus either diethylcarbamazine (DEC) or ivermectin for a period of 4–6 years. Alternatively, fortified cooking salt with DEC is a possibility. In this effort, global healthcare company, SmithKline Beecham has pledged donation (free of charge) of albendazole towards the elimination of LF for as long as necessary, to ensure success of the elimination programme. Merck and Co, similarly has decided to expand its ongoing ivermectin donation programme to include the treatment of LF.

C. P. Thakur, Hon'ble Minister for Health and Family Welfare, while speaking at the GAELF meeting said that the mass administration of a single dose of DEC had been taken up in 1996 in one district of Tamil Nadu, which was later extended to 12 other districts in seven

states. The impact of the strategy is yet to be evaluated, he said. Now based on the recommendation of WHO, 11 more districts have been added since 2000 for mass co-administration of DEC in combination with albendazole. By this, 41 million people in India have been covered by DEC alone and another 26 million under the combination drug administration programme. In India, another 200 million are yet to be covered by this programme.

In the area of diagnosis of LF, the painstaking old method of detecting the microfilariae at night-time has now an easier 'card test'. This card test involves the use of only finger-prick blood samples taken any hour of the day or night for detecting circulating parasite antigens. More research for newer diagnostic tools for LF detection is warranted.

In the elimination of LF, the second strategy would be programmes for educating the community. Awareness has to be raised among the endemic population regarding the preventive treatment available. For those already infected, there is the necessity to help them follow simple hygiene rules to stem further deterioration in their condition.

Eliminating LF would also be a fight against poverty as the disease results in physical incapacitation that severely reduces the LF patient's breadwinning capacity. As individuals in civil society, we need to help towards this effort of raising awareness.

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