EDITORIAL

Current epidemiology of leprosy in India

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Despite the discovery of Mycobacterium leprae more than a century ago and world wide research since then, several epidemiological features of leprosy are still poorly understood. Among the classical epidemiological triad, the agent M. leprae is probably best described, but its entry and exit from the host, its passage into the Schwann cells of peripheral nerves, the incubation period from entry to manifestation of the disease, are at best guesstimates.

Children are probably most vulnerable to infection by M. leprae and after a long incubation period, leprosy manifests during adolescence or young adulthood. The sex ratio of leprosy in children is nearly equal and skews towards males in adults. Whether this is biological or operational has not been conclusively proved, although women, in general, are poorly represented in hospital statistics, due to socio-economic and cultural difficulties. In a study in Maharashtra, initial delay in seeking treatment was higher for females that for males, and even after identifying the symptoms, women were observed to depend exclusively on non-medical treatment for a longer period than males. A link between leprosy and poverty has long been suspected, but is difficult to demonstrate at national, community or even individual levels.

India was one among the 12 countries which failed in 2000 to reach the elimination target of less than one case of leprosy per 10,000 population set by the WHO, but it achieved this goal in 2005, a major milestone not only for India but globally. The efforts are now directed towards elimination at subnational levels. Currently, seven states in India, namely Bihar, Chhattisgarh, Jharkhand, Maharashtra, Orissa, Uttar Pradesh and West Bengal contribute to 73.03% of the total cases in India and 74.9% of the new cases.

Leprosy prevalence has always been uneven geographically, even within a country or within a state or tehsil. In India, during the 1980s prior to the introduction of MDT, the southern states of Tamil Nadu and Andhra Pradesh had the highest prevalence. Today, the endemic and hyperendemic areas of India are in the north and east. Several reasons could be cited for south Indian states to have reached elimination faster: Earlier implementation of MDT and better coverage, and timely release from treatment (RFT) are the major service factors. Better nutrition, greater awareness and early reporting for treatment, as well as improved hygiene could also be responsible. The situation in north Indian States is
quite backward, both in terms of vast terrains to be covered effectively with poorer communications, as well as the backwardness of the peoples concerned. However, the State and Central governments are mounting an intensive attack to attain elimination at district levels by 2007. How far the people would respond satisfactorily is to be seen.\textsuperscript{12}

The simplified management information system now in vogue all over India for uniform collection of data on leprosy allows transfer of consolidated monthly statistics from the periphery (primary health centres and urban units) to the State departments via the District or Zonal health offices. The involvement of the general health staff has facilitated a more complete data collection. Operational factors play a significant role even here in the interpretation of geographical variations.

The trends for prevalence and new cases detection rates in India during 1991–2005 are shown in Figure 1.\textsuperscript{13}

Multi-drug therapy (MDT) with its finite duration of treatment has proved to be quite effective in declaring millions of leprosy patients as cured, and raised hopes of eradication in due course, provided the political will and strong administrative support are assured in terms of capacity building of health workers, adequate supply of MDT, etc.\textsuperscript{14} However, all these efforts will not be really effective in the long run, unless the epidemiology of leprosy is better understood. Even when the transmission ceases due to prompt MDT, the incidence will continue in view of the long and varying incubation of persons infected many years previously.\textsuperscript{15} Special monitoring studies are needed to assess the incidence to leprosy as well as the application of new technologies and the use of simulation studies to facilitate better understanding of what is going on. It is critical that broad-based research into this challenging disease continues until the problems are truly solved.\textsuperscript{16}

\begin{figure}[h]
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\includegraphics[width=\textwidth]{trends.png}
\caption{Trends for prevalence and new cases detection rates in India during 1991–2005.}
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References


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