

THE FIGHT AGAINST LEPROSY - FROM DESPAIR TO HOPE

Presenting the Gandhi Memorial Lecture for 1981 at the Raman Research Institute, Bangalore today, Prof. V. Ramalingaswami, Director-General, Indian Council of Medical Research, New Delhi, called for an all out attack on leprosy saying that we are in a better position than ever before to bring this disease under control. He regretted the lack of precise information on the prevalence of various forms of leprosy in India today but he surmised from various sources of information that there are probably 3.7 million persons afflicted with leprosy living in India today; of these about a fifth or sixth are infectious forms of leprosy. The National Leprosy Control Programme has been in operation for nearly 25 years. Some progress has been made; although all leprosy patients have not yet been brought under the programme, the majority have been reached. An extensive country-wide infrastructure for the delivery of services has been set up and yet the programme continues to limp. Transmission of the disease continues to take place. New cases continued to be discovered. Deformities, ulcers, sensory losses and depressed noses, which are the cause of so much social discrimination against leprosy continue to take place. Case finding especially in the early stages constitutes a major problem. A number of cases remain undetected. Drop out rates are still high. Added to this is the growing menace of the twin problems of resistance and persistence of lepra bacilli. It is known that secondary resistance of lepra bacilli to dapsone has emerged in over 25 countries and primary resistance is also being reported. The organism responsible for leprosy, *M. Leprae* still cannot be cultured outside the human body. Upto now

we have not way of primary prevention of leprosy. The great hopes generated by the discovery of dapsone nearly 4 decades ago, a discovery which was heralded as a wonder drug, have not been borne out by subsequent events. It must, however, be said that dapsone did play a very major role during the past 3 decades in whatever little progress has been made in the control of leprosy throughout the world.

Prof. Ramalingaswami admitted that our tools for the control of leprosy are still inadequate and that intensive research efforts are needed, to find better tools and to improve the existing ones.

Researches now going on in India and abroad offer promise of better tools which if used wisely and intelligently with appropriate delivery strategies can bring about a radical change in the outlook of leprosy in the near future. We now have a better understanding of the immunology of leprosy. Immuno-diagnostic tests are being developed. A sensitive Elisa test and a sensitive radio-immuno assay test have already been established. Monoclonal antibodies are being evaluated for their specificity for leprosy. The stage is now set for the early detection of infection with the leprosy bacillus, an advance likely to have a profound impact on the control programme. We are not yet in a position to predict which of the infected cases will eventually develop clinical leprosy and which of those with clinical disease will develop the severe forms of leprosy. This is a challenge yet to be resolved through research. The recent developments in molecular biology have opened new vistas for improved diagnosis, better epidemiological understanding, improved treatment and effective prevention of leprosy through primary immunisation.

Work in the development of anti-leprosy vaccines is making good progress. Two separate approaches are being explored for primary prevention of leprosy through vaccination. One is the use of killed leprosy bacilli and the other is the use of cross-reactive mycobacteria either killed or live. The WHO is sponsoring studies on the former and the ICMR is sponsoring studies on latter. Studies are going on in our country using a vaccine based on cross-reactive mycobacteria. These vaccines have been developed by Indian scientists. Encouraging responses have been obtained using these vaccines on skin test conversions.

While these exciting developments are encouraging for the future, Prof. Ramalingaswami said that there are several things that can be done here and now, with what we have and with what we know in order to bring about a radical change in the outlook on leprosy. He spelt out a multiple point strategy consisting of:

(a) widespread use of combination drug therapy with rifampicin, clofazimine, dapsone and other chemo-therapeutic agents in suitable combinations to bring down infection load in the community;

(b) early detection of cases through a massive educational programme aided by the new developments in immunological diagnosis of such cases;

(c) regular multi-drug treatment of infectious cases with a special attack on hyper-endemic and tribal areas;

(d) surveillance of school children through a regular school health service;

(e) introduction of a package of software technologies consisting of training of the manpower required at different levels, concurrent assessment and monitoring of the programme with micro loops leading to feed-back and corrective action, effective management systems ensuring a continuous supply line for the drugs starting from production capacity down to village level use of drugs, supportive and sympathetic supervision of village level and a para-medical workers and a radical change in the training of doctors in order to involve them in the study of leprosy and in the control of leprosy and a sensitization of the entire administration from the State capital to the district level and down to the field dedicated to support leprosy control activities.

The need is to transform leprosy control programme from an apathetic unwanted programme to a vigorous programme, using the instruments of Government and society.

Prof. Ramalingaswami concluded by saying that even with the existing technologies, political sophistication and social will can bring about an effective control of leprosy in our country by the year 2000. A new optimism has to be generated. Further impetus to research and training activities is necessary.

The strategy also spells out that those that are unfortunately disabled can be helped to be integrated into society with dignity. Damage to limbs damaged nerve supply can be prevented; muscle balance can be restored to paralysed limbs.

Prof. Ramalingaswami said if cure is not possible in some advance cases, surely care is possible. Human care is inexhaustible and renewable, he says and this was the message of Gandhiji.

The main thrust of Prof. Ramalingaswami's address is that leprosy is yielding and that it can be conquered.
