

Towards Malaria Eradication

Malaria Eradication becomes a living reality

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THE World Health Organization original malaria policy, implied the indefinite continuance of spraying campaigns to check the disease. This, however, meant the maintenance of a large administrative machinery, the permanent employment of valuable trained public health workers and technicians, and above all, a continued drain on countries' financial resources. A solution which, would not entail an indefinitely maintained control was therefore needed.

In Greece, where a nation-wide spraying campaign had been in progress since 1946, the operations had to be discontinued in 1951 on account of lack of DDT supplies. Contrary to expectations this withdrawal of spraying did not result in any startling recrudescence of malaria in those areas. Further experiments revealed that if this break in the cycle of transmission could be maintained successfully for three years, and no new cases are infected, the malaria cycle will naturally become permanently paralysed. These findings led to the idea of discontinuing spraying once the transmission of the disease had been stopped, and this discovery opened out new vistas in the field of malaria eradication by means of a campaign, limited in time.

The Urgency

While the various governments of the world were still debating the possibilities of eradicating malaria from their territories in course of time, the urgency for undertaking such a venture became apparent with the demonstration of the phenomenon of resistance in mosquitoes to the insecticides used against them. Nature, with its inherent resistance to any change

by man against its order, was striking back to thwart all attempts by man to strip the world of this ancient scourge. This fact led to the realisation that, once our present battery of potent insecticides becomes ineffective against the vectors, we would be deprived of the only practical means of eradicating malaria, at present available. It is for this reason that eradication has become a race against time.

In 1955, after studying the subject of anti-malaria activities being carried out in different parts of the world, the Eighth World Health Assembly passed a resolution directing the Member Governments that the ultimate goal of all malaria control programmes should be the *eradication of the disease*. India which was a signatory to this Agreement, decided to convert the nation-wide malaria control to an *eradication* programme, in consonance with the views of this august body. The National Malaria Eradication Programme of India was launched from April, 1958. Under this programme the entire population of the country will be covered.

Programme Phasing

Malaria Eradication implies the reduction of the parasite reservoir in the human population to such a negligible level that, once it has been achieved, there is no danger of resumption of local transmission. The Indian Malaria Eradication programme has three distinct phases namely an *attack* phase, a *consolidation or surveillance* phase, and a *maintenance* phase.

The attack phase consists of spraying with DDT all human and cattle dwelling places in every part of the country. As far as the

urban areas are concerned, since it is not possible to spray large cities and towns, it was considered more economical to carry out anti-larval measures, and confine spraying to the areas on the peripheral belt only to fortify the measures undertaken against mosquito breeding.

Normally the continued prevention of any new infection through spraying over a period of three to four years, should result in reducing the reservoir of infection in human beings to negligible proportions, so that spraying can be withdrawn. But to ensure that there are no lapses and all the technical criteria are fulfilled to enable the withdrawal of spraying, another organisation, under the Malaria Eradication Project, will go into the field to carry out the surveillance operations.

The surveillance programme consists of such activities as finding out the people who still carry the parasite, giving them the drug for curing this infection; and determining the source of this infection. This work will be done through fortnightly house to house visits by the surveillance workers all over the country, to check on any fever case or a case with history of fever. A blood smear will be prepared and drugs administered to each of the cases detected. If in one examination of blood films, a person is found to be malaria positive, he will be given the radical treatment to sterilise the infection in him. Appropriately compared to searching for a needle in a haystack, this phase is the most difficult part of the campaign. This surveillance is to continue for a minimum period of 3 years.

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