A REVIEW OF THE PROBLEM OF FILARIASIS IN CEYLON

(item proposed by the Government of Ceylon)

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Filariasis has been known to exist in this country for a very long time. References have been made to the disease in "Sarartha Sangrahaya", compiled by King Buddhadana in 340 A.D., and in "Yogaratnakara", compiled during the reign of King Buvaneabahu of Kotte about 450 years ago.

According to records maintained by Medical Department in Ceylon, the earliest microfilaria case was recorded in Matara hospital in 1893; the earliest clinical case was recorded in Kandy hospital in 1879.

P.H. Manson Bahr (1913), Sweet (1925), H.F. Carter (1932), and Dassanayake (1936) spotlighted the presence of the disease in certain parts of the country. The amount of filariasis in Ceylon was not known until a survey was carried out by Dassanayake in 1939. The survey revealed prevalence of the disease in certain pockets in the southern, north-western, eastern, western and north central provinces of Ceylon. The predominant species found was *W. malayi*. The bancroftian type was found mainly in Galle and Matara. *W. malayi* was transmitted by *Mansoninae unifornis* found in association with *Pistia stratiotes*; *W. bancrofti* was transmitted by *Culex fatigans* breeding in water collections (especially catchpits attached to bucket latrines) in the immediate vicinity of the house.

Owing to the outbreak of World War II in 1939, no control programme was possible. About two years after the termination of the war many cases of lymphangitis were brought to the notice of the Department of Health and this resulted in the inauguration of a separate campaign for the control of filariasis in 1947. Surveys carried out soon after the inauguration of the campaign revealed foci of infection in the western coastal belt of Ceylon and also in the areas detected in the 1937 survey. The infection in the urban areas was mainly confined to *W. bancrofti*, whereas in the rural areas it was due to *W. malayi*. **
Prior to the introduction of diethyl carbamazine for the treatment of filariasis, emphasis was laid on the control of the vector, for the purpose of bringing down the incidence of the disease. D. Santiago-Stevenson and others (1947) reported the effect of the drug on microfilariae and the adult worm. Observers from other parts of the world also reported very favourable results, so much so that from a public health point of view, the emphasis shifted from vector control to parasite control. Various dosages have been tried out in different parts of the world, but the one that appears to be widely used is 2 mg./kg. of body weight for one or more weeks. This has been the line of therapy adopted in Ceylon for the past ten years.

Taking into consideration the fact that a number of patients showed negative counts for microfilariae for several months after cessation of treatment, it may be argued that control of the disease, to a very large measure, could be achieved by the use of diethyl carbamazine on mass scale. Although this suggestion may sound true theoretically, many obstacles present themselves, especially in urban areas.

A disciplined population (e.g. army personnel) or a population under control (e.g. estate population or rural population especially from very backward areas where there is still respect for authority) may be amenable to following a complete course of treatment or taking prophylactic treatment. Unfortunately this cannot be said of the urban type of population, and consequently prolonged therapy or prophylaxis at monthly intervals are not favoured.

Under such circumstances one has no alternative other than to resort to vector control in addition to parasite control. Control of the adult mosquito by spraying residual insecticides has not been successful against Culex fatigans, owing to the resting habits of this species of mosquito. Anti-larval control, too, presents problems in the way of missed breeding places (inside or outside the house) and unsuitability of the larvicide.

Hence future trends should be towards finding an efficient chemotherapeutic agent with a shorter course of treatment and also a larvicide that would readily go into solution or suspension in water.