

## ABSTRACT

This thesis covers four studies related to the national Programme for the Elimination of Lymphatic Filariasis, each one providing new information to assist in future activities of the Programme.

Rapid assessment procedures (RAPs) to study the presence and degree of lymphatic filariasis (LF) were tested in Hambantota district by use of questionnaires mailed to all *Grama Niladharis* (GNs, Village Headmen) of a total 576 GN divisions and Focus Group Discussion (FGD) conducted in approximately 10% of all GN divisions. Hydrocoele was recorded in 479 GN divisions. To study reliability of information given by local people, 1,170 males from 24 GN divisions were clinically examined for hydrocoele. Urine IgG4 ELISA was also done on 1,800 subjects from 15 GN divisions. A positive significant correlation was established between ordinary peoples' information on filariasis prevalence and actual infection status based on clinical and immunological examinations.

Similarly in Galle district, the data on hydrocoele, elephantiasis and socioeconomic indicators were obtained by RAP through GNs, and subjected to Geographical Information System (GIS) using TNTmips software. The maps prepared for Galle and Hambantota districts, together with a similar map made previously for Matara district, were sliced into six zones by distance from the coastline to analyse hydrocoele and elephantiasis distribution. A clear aggregation of clinical cases was seen on the west side of Hambantota district. In Galle and Matara districts, only elephantiasis showed aggregation along the coast. Hydrocoele was evenly distributed.

Mass drug administrations (MDAs) were carried out in 3 Walgama suburbs for six years. Three different combinations of single dose treatment with DEC and albendazole were compared. With any combination, the community-wide treatments suppressed the mf prevalence and density to significantly low levels. However, after 12 MDAs two divisions still did not reach the targeted mf level of <1%. The effect of MDAs on soil-transmitted helminthiasis was also studied with an additional suburb. A significant decline was observed in the prevalence.

Before lymphoedema management programme, the information on lymphoedema and its management was collected from 101 cases: 32 of them had lymphoedema of grade III

and above. Males had significantly more entry lesions (EL) than females. Also, more common among severe lymphoedema cases. Many had acute inflammatory episodes (AIEs) with fever. Five components of lymphoedema management protocol (LMP), i.e., limb hygiene, care of EL, limb elevation and exercise, and foot protection using footwear were ignored by many. Modern lymphoedema management strategies had neither reached the communities nor the physicians. Modified Dermatology Life Quality Index (DLQI) in the 32 cases was  $>5$ , with the Mean 10.3, indicating poor quality of life.

LMP was then applied to a sample of 27 patients: 14 were monitored daily as daily follow-up group (DFU) and 13 once a month as monthly follow-up group (MFU). Evaluations were carried out at one year in terms of Knowledge, Attitude, Practices (KAP) on LMP, EL presence, AIEs, limb volume, and photographic evidence of improvement. The modified DLQI and benefit scores were also used to assess quality of life and benefits gained following LMP. All scores for each KAP question were higher in DFU. The mean limb volume in DFU reduced significantly, but did not so in MFU. Five of six improvements in the photographs were in DFU. The mean DLQI score reduced significantly in DFU. Average scores under long-term benefits were significantly higher in DFU.