ESTABLISHMENT OF A FIELD EPIDEMIOLOGICAL STUDY FOR THE DETAILED MONITORING OF HUMAN MALARIA TRANSMISSION

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An epidemiological study was undertaken to determine quantitatively the impact of transmission blocking immunity on malaria transmission. This involves the close monitoring of all variables of malaria transmission such as, the malaria incidence, the levels of immunity in humans, aspects relating to the vector such as indicators of vectorial capacity, meteorological information etc. This information would ultimately be used to mathematically analyse and quantify malaria transmission incorporating transmission blocking immunity.

The project is presently underway and the work so far has resulted in 1) defining a study area in the south-eastern coastal region of Sri Lanka, which is endemic for vivax malaria. There, a cluster of 7 contiguous villages with a total population of 3515 and 850 houses was chosen for the study. 2) Developing an organisational infrastructure necessary for the 'project operations' by establishing a 'field station', numbering houses and constructing a detailed map recording each house, distributing 'household cards', compiling 'directories' of names and housenumbers, and establishing malaria detection clinics in the study area. It is now possible to monitor each of the 3515 residents of this area with respect to malaria. 3) Establishing a monitoring programme in Parasitology/Immunology (human, malaria cases) and in Entomology (Anopheline species), and the collection of 'samples' of sera and mosquitoes. 4) Storage and analysis of data obtained from the 'field' on a computer database management system. We thus present a functional organisational structure of an epidemiological study in a demographically well defined situation in which most aspects of malaria transmission can be closely monitored; detailed information on immuno-epidemiology and entomology of malaria are being obtained through this system which affords a facility appropriate even for subsequent malaria vaccine trials.

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