

## *Conclusions*

While the prevalence of periodic form of *W. bancrofti* has been reported from some islands of Andaman, diurnally subperiodic form of *W. bancrofti* is prevalent only in Nicobar group of islands with a population of 39000 the containment of this infection should be given top priority before it infiltrates into the non-endemic receptive areas.

The current study shows that *Oc. niveus* is the only vector from a range of 12 species observed to bite human in Teressa island. Transmission was observed to be perennial. The vector of this infection is a forest dweller, breeds primarily in cryptic breeding sites viz., tree holes spread out in vast jungle tracts that are inaccessible. The vector mosquito bites human during their daytime activity in the forest. The adults are exophagic and exophilic and therefore none of the adulticidal measures would be operationally be feasible. With the given breeding peculiarity of this species, biological control with *Toxorhynchites* sp. (larvivorous mosquito during larval stage) could only be the choice of control. As this area is inhabited exclusively by the tribal community who depend on forest produce for their livelihood, their frequenting the forest cannot be restricted. Therefore, none of the personal protection measures against the bite of mosquito is feasible including repellants, which could well be cost prohibitive. Therefore, the only alternative method of containing this infection is chemotherapy to liquidate the parasite load through use of microfilaricidal drug. The available options for this are selective administration with DEC and periodic administration of annual single dose DEC chemotherapy.

Under selective chemotherapy, the whole population should be thoroughly screened to identify and treat the mf carriers. Such screening will also not identify all the infected people and many low microfilaraemia carriers and pre-latent phase as well as single sex infections will be left undetected as the current diagnostic method – blood smear examination, is not a very sensitive technique. In the present study it is estimated that the proportion of false negatives attributable to the blood sampling processes is about 5%. Even this proportion could increase the mf prevalence to a greater extent in a community.

Antigen testing is now recognized as the method of choice for detection of *W. bancrofti* infections. The application of antigenemia detection tests has been found to be specific, sensitive and instant (Nguyen *et al.* 1999; Bhumiratna *et al.* 1999; Phantana *et al.* 1999; Simonsen and Dunyo 1999; Pani *et al.* 1999; Sunish *et al.* 2001). Control of filarial infection, by adopting antigen-based tools could detect all the infected individuals including microfilaraemics in a community and subsequently a complete course of treatment given.

The typical eco-geographical island situation with closed communities, augurs well for antigen based detection and subsequently administering selective DEC treatment. Follow up of individuals would be easy as compared to other settings where migration of individuals poses problems to control programs.

Alternatively mass drug administration could be another option, but the success of this programme depends upon achieving very high treatment coverage rates.