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SURACHART KOYADUN : FIELD TRIAL OF IMMUNOCHROMATOGRAPHIC TEST (ICT) FOR DIAGNOSIS OF *WUCHERERIA BANCROFTI* INFECTION IN ENDEMIC POPULATION. THESIS ADVISORS : JIRASAK ROJANAPREMSUK, Dr.P.H., WONGDYAN PANDII, Dr.P.H., ADISAK BHUMIRATANA, M.Sc. (Physiology), PRAYUTE BUDDHIRAKKUL, M.Sc.(Trop.Med.), SARAVUDII SUVANNADABBA, M.D., M.P.H.(Epid.) 67 p. ISBN 974-611-959-4

The detection of circulating filarial antigens (CFAs) has only recently been recognized as a major tool in diagnosis of lymphatic filariasis. The CFA detection by immunochromatographic test (ICT), a rapid card test format, is a new diagnostic method that may be used for detecting *Wuchereria bancrofti* infection under field conditions. In this study a field trial of ICT card test was conducted, by comparison with clinical and recall techniques, capillary tube technique and thick blood film for determining infection rates. Subjects were 225 people from *W. bancrofti*-endemic villages of Maechan sub-district, Aumpang district, Tak province. Data were collected during March-May 1998.

The ICT card test indicated a 20 % infection rate whereas other methods indicated lower infection rates of 5.8 % by clinical and recall techniques, 5.3 % by capillary tube technique and 5.8 % by thick blood film. Results of the different tests were statistically significantly different with $p\text{-value} < 0.001$. The ICT card test had a specificity of 100 % when sera from microfilaremia subjects with and without non-filarial infections were positive and with sera from *W. bancrofti*-non endemic people either with *Brugia malayi* microfilaremia, or with other parasites, and from normal control which all received negative test results. When done in *W. bancrofti* microfilaremia sera, ICT card test had a sensitivity of 100 % using a microscopy as reference, and 77 % when using clinical and recall techniques as reference. The sensitivity of ICT card test was decreased when done in clinical disease sera. However, ICT card test was more sensitive than the others, especially when done in endemic normal sera (14 % positive). Such findings suggested that ICT card test may prove useful for rapid assessment of *W. bancrofti* infection. Such rapid assessment should improve programs for the control and elimination of bancroftian filariasis.