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**HIGH OCCURRENCE OF FALCIPARUM MALARIA AND CHLOROQUINE RESISTANCE IN AN OPERATIONAL AREA IN THE NORTHERN PROVINCE**

Malaria has been endemic in the Northern Province of Sri Lanka for several centuries, but it has become a major problem in recent years. This study was carried out to determine the occurrence of malaria among security forces and police personnel working in an area situated 28 km east of Mannar in the Northern Province and to

assess the efficacy of chloroquine and sulfadoxine-pyrimethamine in the treatment of malaria in this area.

During the period January - May 2002, 691 personnel were screened for malaria by microscopy. Of 131 (18.96%) patients who were positive by microscopy, 85 (64.9%) had *Plasmodium falciparum*, 34 (25.95%) had *P. vivax* and 12 (9.16%) had mixed infections. The extended 28-day in vivo test of drug resistance for chloroquine was carried out on 111 patients. Thirty four (44.15%) out of 77 *P. falciparum* infections that completed 28 day follow up showed evidence of chloroquine resistance: 29 (85.29%) at R1 level and 5 (14.71%) at R11 level. These patients were treated with sulfadoxine-pyrimethamine and followed up for a further 42 days; none showed evidence of resistance to this. None of the *P. vivax* infections nor the mixed infections recrudesced during the 28 day follow-up period. Of 19 in vitro micro tests carried out to identify the chloroquine-resistant strains, 15 (78.95%) showed resistance. Seven (46.67%) of these isolates showed both in vivo and in vitro resistance. The slide positivity rate is similar to that usually seen in Sri Lanka, but the *P. vivax*: *P. falciparum* ratio is inverted. This is probably a result of the selection of chloroquine resistant *P. falciparum* strains by the continued use of chloroquine and a resultant increase in transmission of these strains. Unless a proper management protocol is implemented in operational areas along with a regular system of vector control, there is a grave danger that this pattern of infection may spread to the rest of Sri Lanka as well.