A-18: Clinical immunity of patients with chloroquine-resistant *P. Falciparum* infections

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Malaria infections were monitored in a population of 1977 resident in Kataragama, a malaria endemic area for a period of 17 months from January 1992. Using both

passive and active case detection methods, a total of 1903 malaria infections were detected of which 810 (42.5%) were caused by P. falciparum and the rest by *.vivax*. Of the 810 *P.falciparum* infections only 610 were identified as being due to new inoculations, the other 200 infections were detected each within a period of 3 - 4 weeks of the patient's previous *P.falciparum* infection and were therefore considered as recrudescences due to chloroquine-resistance. The incidence of chloroquine resistance among *P. falciparum* infections in the population was estimated to be at least 28%.

Based on a detailed clinical evaluation, patients with Chloroquine resistant *P. falciparum* had less severe symptoms during the recrudescence (on the second and third visits) than during the primary infection. Several patients with recrudescences were completely asymptomatic and were detected during mass blood surveys; they were however symptomatic during their primary infection and had then presented themselves for treatment.

The proportion of patients who had detectable gametocytes in their blood was slightly higher during the recrudescence than during the primary infection.

This study shows that chloroquine resistant infections rapidly give rise to clinical immunity leading to a decrease in the prevalence severity of disease symptoms. Such infections are thus likely to remain untreated. Recrudescences of chloroquine resistant infections are also more likely to be transmitted to mosquitoes because of a greater tendency to have circulating gametocytes. Passive case detection, thus seems to be now inadequate for case detection for malaria control in Sri Lanka in view of the prevalence of chloroquine resistance.