

Short Report**Increase of chloroquine resistance *in vivo* of *Plasmodium falciparum* over two years in Edea, south Cameroon**

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Chloroquine-resistant *falciparum* malaria is progressively spreading, in Africa from east to west. In southern Cameroon chloroquine resistance was first reported by

counts of at least 500 trophozoites/mm³, and who had taken their 3 d treatment on days 0, 1 and 2, were included in the sensitivity test. In 1991 chloroquine blood levels on days 0 and 3 were evaluated by means of an ELISA described by WITTE *et al.* (1990).

The groups did not differ significantly in number, age, weight, sex, spleen rate or parasite density on day 0 (Table 1). Sixty-eight children met the enrolment criteria in 1989 and 52 in 1991. Their parasitological results are given in Table 2.

In 1991, chloroquine levels on day 0 were between 0 and 140 ng/ml in 80% of the children included in the test. All children but one (98.6%) had blood levels between 140 and 560 ng/ml on day 3, with a mean level of 270 ng/ml (standard deviation=86.5).

In 1989, 12 of 68 children admitted to the study (17.5%) had demonstrated parasitological resistance *in vivo*. In 1991 resistance had increased to 44% (23 of 52 children). This difference was significant ($\chi^2=8.83$, one degree of freedom, $P<0.001$).

Two subjects (2.9%) showed RIII resistance (no reduction in parasitaemia) in 1989; in 1991 this was so for 4