

## RESEARCH NOTE

## The Changing Behaviour of *Plasmodium vivax* in Colombia: Relapses Despite Standard Treatment with Primaquine

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In 1989, Arias & Corredor, (AE Arias & A Corredor 1989. Low response of Colombian strains of *Plasmodium vivax* to classical antimalarial therapy. *Trop Med Parasit* 40: 21-23.) reported the first cases in Colombia of relapses of *P. vivax* malaria in patients who received the standard 1500 mg chloroquine treatment plus 15 mg/day - 14 days primaquine treatment and under conditions which precluded reinfection. A retrospective review of the

clinical records of 424 patients with either *P. vivax* or mixed infection (*P. vivax* and *P. falciparum*) seen at the malaria outpatient clinic during the period 1987 to 1993 was carried out. 15 (3.5 %) cases of relapses were found, 11 of them with a single relapse and four of them with multiple relapses, all of the relapses being detected while the patients were living in non-endemic areas. Two of the patients with multiple relapses had 5 and 4 episodes, respectively, after the initial attack, the interval between relapses being 7 to 15 weeks. Relapses occurred despite the fact that after every attack the dose of primaquine was increased.

These cases confirm the previous findings and suggest the presence in Colombia of strains of *P. vivax* with low response to primaquine which may cause multiple relapses with an average interval between relapses of 8 to 10 weeks, the behaviour of these strains being similar to that of the Chesson strain from Papua, New Guinea. To our knowledge, strains with such a behaviour have not been previously reported elsewhere in Latin America. Such strains pose a potential public health problem by increasing the morbidity due to malaria in endemic areas. These findings also highlight the need for developing new chemotherapeutic agents against the hypnozoite stage.