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.