A total of 96 residents in Kenya, who had life-long, intense exposure to malaria, donated blood samples for malaria parasite smears [date not given]. Each volunteer was then treated with a single dose of 3 tablets of pyrimethamine-sulfadoxine (Fansidar), followed by 100 mg of doxycycline twice daily for 7 days. Volunteers were visited for the next 96 days and blood smears were analysed on days 7, 14, 28, 42, 56, 70, 84 and 98, and any other day a volunteer complained of illness. Of 82 who completed the study, 32 (39%) had *P. falciparum* on day 0. Between day 42 and 96, there was a gradual increase in the cumulative proportion with parasitaemia. By day 96, 60 (75%) had become positive. Seventy-five percent had *P. falciparum* reinfection within 96 days after radical treatment and was referred to as "early reinfected" group, whereas the remaining 25% who did not develop reinfection within the study period was classified as "delayed reinfected" group.