Malaria chemosuppression in pregnancy. II. Its effect on maternal haemoglobin levels, placental malaria and birth weight.

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Abstract

The malaria prophylactic effects of chloroquine (CQ), proguanil (PROG), and chloroquine-proguanil combination (CQ+PROG) during pregnancy on maternal haemoglobin levels (Hb), placental malaria, and birth weight were assessed in Muheza, Tanzania. Within 2 months of prophylaxis, severe anaemia in primigravidae (PG) was reduced from 21% (22 cases) to 13% (13 cases). There was no positive effect in multigravidae (MG). Sustained increases in the mean Hb occurred in PG of the PROG and CQ+PROG groups. The mean Hb of PG of the CQ group decreased after an initial increase, possibly due to the selection of more and highly chloroquine-resistant strain(s). The mean birth weight of PG was highest in the CQ+PROG (2.89 kg) and least in the CQ group (2.71 kg). The CQ group had the highest low birth weight rate (LBW). The prevalence of placental malaria was highest in the CQ (28%) and lowest in the PROG group (12%). For all the prophylactic effects, PROG and CQ+PROG did not differ significantly. Thence, the deployment of CQ+PROG for prophylaxis would be unnecessary. Proguanil is a suitable alternative to chloroquine prophylaxis. Due to possible emergence of proguanil resistance, deployment of this drug should incorporate constant monitoring for resistance and the eventual prophylaxis efficacy. The search for other effective malaria control measures should continue.