

Concentration in normals and in patients with severe Plasmodium falciparum malaria

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Abstract:

Mefloquine pharmacokinetics were studied in Kenyan African normal volunteers and in patients with severe acute attack of Plasmodium falciparum malaria. Peak concentrations were achieved in both groups at 20-24 hours. The mean half-life of elimination was 385 ± 150 hours (mean $\pm$ SD) in normal subjects while in severe malaria it was 493 ± 215 hours which was significantly longer (P less than or equal to 0.001). The volume of distribution was significantly smaller in severe malaria where it was 30.76 ± 10.50 l/kg (mean $\pm$ SD) while in the normal subjects it was 40.90 ± 20.70 l/kg (mean $\pm$ SD) (P less than or equal to 0.001). The total body clearance in severe malaria was 3.75 ± 1.51 l/h (mean $\pm$ SD). This was significantly lower than in the normal subjects where it was 5.15 ± 1.50 l/h (mean $\pm$ SD) (P less than or equal to 0.001).