

Effectiveness of chloroquine and sulfadoxine/pyrimethamine combination in the treatment of falciparum malaria in a malaria endemic area of Kenya

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Abstract:

A study on the comparative efficacy of two antimalarial drugs, namely chloroquine and sulfadoxine/pyrimethamine combination in the treatment of falciparum malaria was carried out in Siaya District, Nyanza Province of Kenya. Children aged between six to sixty months attending Bondo sub-district hospital with a history of fever within 48 hours were screened for malaria parasites. Those found to have a parasite density of ≥ 1000 parasites/ μl of blood were recruited and randomly allocated to two treatment regimens comprising of chloroquine at a total dose of 25mg/kg body weight given for three days and sulfadoxine/pyrimethamine combination given as 25mg/kg of sulfadoxine and 1.25mg/kg of pyrimethamine as a single dose. The children were followed on days 3, 7 and 14. A total of 92 children met the inclusion criteria and were allocated to treatment with either chloroquine or sulfadoxine/pyrimethamine combination. Of those on chloroquine, parasite clearance on days 3, 7 and 14 was 31.1%, 44.4% and 42.3% respectively, while sulfadoxine/pyrimethamine combination had a clearance of 70.2%, 91.5% and 95.7% respectively. The differences in the parasite clearance on each follow up days for both drugs were statistically significant ($p < 0.0001$). Other parameters which included fever and packed cell volume (PCV) were seen to improve significantly for the sulfadoxine/pyrimethamine combination than for chloroquine