Drugs for treatment and prevention, and other novel therapies

PO - (8492) - REPEATED ARTEMISININ BASE TREATMENT ON MALARIA SEXUAL PARASITE DISTRIBUTION IN POPULATION LIVING IN A MALARIA ENDEMIC AREA OF BURKINA FASO

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EFFECT OF REPEATED ARTEMISININ BASE TREATMENT ON MALARIA SEXUAL PARASITE DISTRIBUTION IN A POPULATION LIVING IN A MALARIA ENDEMIC AREA OF BURKINA FASO (WEST AFRICA)

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Background:
Malaria elimination and is ultimate eradication will require drugs targeting all stages of the parasite’s life cycle. Yet, very few drugs are known to be effective on the sexual stages (gametocytes) of Plasmodium falciparum. Artemisinin-based combination therapy (ACT) have been shown to have some early-stage gametocytocidal effects on both in vitro and in feeding experiments. However, field studies showed that artesunate reduces but does not prevent post-treatment transmission of P. falciparum to mosquitoes.

Methods:
763 children and adult patients with acute uncomplicated Plasmodium sp. malaria were included in a phase IIIb/IV comparative, randomised, multi-centre, open label, parallel 3-arm to assess safety and efficacy of repeated administration of pyronaridine-artesunate, dihydroartemisinin-piperaquine or artemether-lumefantrine or artesunate-amodiaquine over a two-year period. Drugs were given base on the body weight and volunteers followed up to 42 days. Clinical sign and symptoms were records and filter paper and blood smears collected during each visit. Malaria parasites were access and parasite density development stages determine by light microscopy.

Results:

P. falciparum gametocyte was 1.9%, during the two years follow up. From the three treatment arms, artesunate-amodiaquine was the arm bearing more P. falciparum gametocyte with 68.7%, dihydroartemisinin-piperaquine accounted for 6.3% and pyronaridine-artesunate for 25%. P. falciparum gametocyte was more pronounced in population having parasite density ≤ 100000 parasites/µl compared to above parasitemia.

Conclusion:
Repeated ACTs treatment didn’t clear P. falciparum gametocyte in uncomplicated malaria infected population.

Keywords: ACTs, P. falciparum gametocyte.