

PA-022 **COMPARATIVE PROTECTIVE EFFECT OF REPEATED ADMINISTRATION OVER A TWO YEAR PERIOD OF 3 ACTS ON THE EMERGENCE OF HYPERPARASITEMIA IN MALARIA PATIENTS**

San Maurice Ouattara, Issiaka Soulama, Sam Coulibaly, Jean Moïse Kabore, Alphonse Ouedraogo, Edith Bougouma, Souleymane Sanon, Diarra Amidou, Benjamin Sombie, Amidou Ouedraogo, Désiré Kargougou, Daouda Ouattara, Nebie Issa, Alfred Tiono, Sodiomon Sirima. *CNRFP, Burkina Faso*

10.1136/bmjgh-2016-000260.59

Background Hyperparasitaemia in malaria infection represents a worsening circumstance of the patient's condition; however, it still remains a concept with a controversial definition and seems likely to be understudied. The present study in the framework of the WANECAM activities aimed to assess the protective effect of 3ACTs on the emergence of the hyper-parasitaemia when repeatedly administered over a period of two years to patients with uncomplicated malaria.

Methods A two-year prospective longitudinal study (763 adults and children) was conducted in a malaria endemic area of Burkina Faso. Passive detection of malaria cases with parasitaemia ≥ 200000 trophozoites/ μl was done. Malaria smear was performed for hyperparasitaemia confirmation; a clinical examination and demographic data were recorded. Each patient was repeatedly treated with one of the three anti-malarials, pyronaridine-artesunate, dihydroartemisinin-piperaquine or artesunate-amodiaquine, at any uncomplicated malaria episode.

Results A total of 107 cases of malaria with hyperparasitaemia were diagnosed; 63.55% occurred in under-five years children. The geometric mean of parasite density was 283366 trophozoites/ μl (CI 95%: 264644–302087). The 46 cases recorded in the pyronaridine-artesunate treatment arm (224 patients) was higher compared to the 39 cases in the artesunate-amodiaquine arm (315 patients), ($p=0.0024$) and to the 22 cases in the dihydroartemisinin-piperaquine arm (224 patients), ($p=0.0022$). The difference between dihydroartemisinin-piperaquine and artesunate-amodiaquine treatment arms was not statistically significant ($p=0.40$).

Conclusions From this study, children under five year of age were mostly at risk of hyperparasitaemia. Dihydroartemisinin-piperaquine and artesunate-amodiaquine seem the most protective antimalarial against the occurrence of hyperparasitaemia.