PA-019 IMPACT OF TREATMENT OF UNCOMPLICATED MALARIA BY AMODIAQUINE–ARTESUNATE (AS-AQ) ON PFCRT 76T AND PFMDR1 86Y MUTATIONS SELECTION IN *PLASMODIUM FALCIPARUM* ISOLATES, REPUBLIC OF GUINEA

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Background The use of Amodiaquine monotherapy is associated with the selection of resistance markers (*Pfcrt* and *Pfmdr*1). The decrease in sensitivity and the emergence of *Plasmodium falciparum*-resistant strains have been reported.

It is therefore important to know the impact of treatment of uncomplicated malaria with amodiaquine–artesunate (AQ–AS) on *Pfcrt*76T and *Pfmdr*1 86Y mutations strains of *P. falciparum*.

Methods We applied the standard protocol of 28 days of WHO 2003, to determine the *in vivo* efficacy of the combination AQ–AS. In total 170 subjects were included in the study. Molecular analysis focused on 168 dried blood spots. The aims were to determine the frequency of *Pfcrt*76T and *Pfmdr*1 86Y mutations, to determine the rates of reinfection using polymorphism markers MSP1, MSP2, and microsatellite CA1, Ta87, TA99. Nested PCR followed in some cases by a restriction enzyme.

Results The level of *P. falciparum* clinical response was 92.85% (156/168) of ACPR before molecular correction and 7% (12/170) LPF. The ACPR after molecular was 97.01% (163/168). The frequency of mutation point *Pfcrt* 76T was 76.19% (128/168) before treatment and 100% (7/7) after treatment, p=0.14. For *Pfmdr*1 mutation the frequency was 27.97% (47/168) before treatment and 60% (6/10) after treatment, p=0.03. Rate of *Pfcrt*76T +*Pmdr*1 86Y was 22.02% (37/168) before and 50% (6/12) after treatment p=0.003.

Conclusions Despite the combination of AQ with AS, the treatment selected *Pfcrt*76T and *Pfmdr*1 86Y mutations in Guinea.