Background Malnutrition and *Plasmodium falciparum* malaria are two major public health problems in sub-Saharan Africa. In this study, we described as our primary outcome the proportion of presence of *P. falciparum* during follow-up and explore the relationships between malaria drug safety and nutritional inadequacies.

Methods This was a secondary analysis of an *in vivo* prospective randomised control trial conducted in Bougoula-Hameau, Mali. Our analysis concerned 749 children followed during 28 days. We determined the BMI status of each child according to the cut-offs defined by WHO in 2007. R-software was used for statistical analysis.

Results The median of parasite density was higher in thin and severely thin children (17800). The median of haemoglobin levels at enrolment was lower in children who were thin and severely thin (9.85) compared to the children with normal weight, overweight and obesity. At 21 days, there was no parasite in thin and severely thin children. At the same point of follow-up, 7.5% of children with normal weight had parasites versus 8.4% of overweight and obese children. Between the three groups the difference was significant (p=0.03). On day 7 the highest ASAT level was observed in children with normal weight (p=0.03). We didn't observed differences between weight status groups regarding the level of creatinine. The p-value was respectively 0.99, 0.41 and 0.07 at enrolment, day 7 and day 14.

Conclusions This study showed that children with BMI deficiency had a higher parasite density and lowest haemoglobin level at enrolment. However, we did not observe a relationship between weight deficiency and the safety of antimalarial drugs used in our study.

PA-044 WEIGHT STATUS ROLE ON ANTIMALARIAL DRUG EFFICACY AND SAFETY IN SUBURBAN CHILD POPULATION IN MALI

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