PA-032 GENETIC POLYMORPHISM OF MEROZOITE SURFACE PROTEIN-2 IN *PLASMODIUM FALCIPARUM* ISOLATES FROM DELIVERING WOMEN IN SOUTHERN BRAZZAVILLE, REPUBLIC OF CONGO

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Background In the Republic of Congo, the genetic diversity of *Plasmodium falciparum* has been extensively studied in isolates from children. However, limited data are available for isolates collected from delivering women. This study was conducted to

determine the genetic polymorphism of merozoite surface protein-2 (*msp-2*) gene in *Plasmodium falciparum* isolates from asymptomatic delivering women in Brazzaville.

Methods We used a total of 114 peripheral whole blood samples from delivering women collected from April 2014 to April 2015 at Madibou health centre in Southern Brazzaville and previously characterised as *P. falciparum*-positive by PCR technique targeting the *SSUrRNA* gene. After extraction of DNA using QIAamp DNA Blood Mini kit (Qiagen), the samples underwent nested PCR of the *msp-2* (block 3) and the allelic families, namely 3D7 and FC27, were determined.

Results All the isolates were successfully genotyped. A total of 33 *msp-2* alleles were detected, of which 17 belonged to the allelic family 3D7 and 16 to FC27 family. The 3D7 allelic family showed higher frequency (63.4%) compared to FC27 (36.6%) and 62 isolates (54.36%) harboured only 3D7 allele, while 22 (19%) harboured FC27 allele only and 30 (26%) showed both of these alleles. The mean multiplicity of infection (MOI) was 1.4 (95% CI: 1.33–4.01) and 35% of isolates had multiple genotypes. The MOI was lower in isolates from women who had not received any IPTp-SP (1.3) compared to those from women who had 3 doses of IPTp-SP (1.5) or in isolates from primiparous (1.3) compared to that of multiparous (1.5); however, the difference was not statistically significant ($p > 0.05$).

Conclusions This is the first report on genetic diversity of *falciparum* isolates from delivering women in the Republic of Congo. A noteworthy diversity was observed; the multiplicity of infection was neither influenced by IPTp-SP or parity.