

PA-845 **CROSS-REACTIVE ANTI-SARS-COV-2 ANTIBODY DETECTED IN PLASMA FROM PRE-COVID-19 PREGNANT WOMEN IN YAOUNDÉ ARE NOT NEUTRALIZING**

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**Background** Our study aimed to determine the neutralizing capacity of anti-SARS-CoV-2 antibodies found in the plasma of pregnant women collected during the pre-pandemic period to COVID-19 in three settlements in Cameroon.

**Methods** A total of 1,590 archival plasma from pregnant women during pregnancy (574) and at delivery (657) were tested for COVID-19 using the Abbott Panbio TM COVID-19 IgG/IgM rapid diagnostic test. Samples from 120 (9.75%) women were collected from the rural area, 663 (53.86%) in

the peri-urban area, and 448 (36.40%) in an urban area at different antenatal visits. To ascertain our findings, randomly selected IgG & IgG/M positive samples (70) were further tested by the Luminex technology specific for viral N and S proteins. The neutralizing capacity of 21 samples with the highest titers against the S protein were assessed against the founder SAR CoV-2. Data was summarized in proportions.

**Results** During pregnancy with the Luminex technology, 12.50% (4/32) and 3.13% (1/32) of pregnant women were seropositive to the S-protein and N/S proteins respectively. At delivery, 50% (10/20) of women were seropositive for anti-coronaviruses IgG directed against the S-protein only and 15% (3/20) while had antibodies against the N&S protein. A transplacental transfer of protective S proteins from the mother to the child was found in 60% (3/5) of the tested dyads. During the neutralization assay, 0% of these antibodies found in these pregnant women before the pre-pandemic period at COVID-19 were neutralizing to the ancestral strain.

**Conclusion** This study provides evidence of existing of cross-reactive anti-SARS-CoV-2 antibodies among pregnant Cameroonian women in the Pre-COVID-19 eras but are not neutralizing against the ancestral virus.

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