neutalisation activity against a panel of 3 clade A and D viruses using the Neutralisation Assays. Neutralisation assays were performed using Env pseudovirus viruses in the TZM-bl cell-based assay. Neutralisation values were obtained as the plasma dilutions at which virus entry was inhibited by 50% compared to that in the absence of plasma (IC50). A plasma sample was scored as displaying neutralising activity against a particular virus if at least 50% inhibition of infection was recorded at the lowest plasma dilution tested (1:20) in at least two independent neutralisation assays.

**Results**

Clade A viruses are better neutralised compared to clade D viruses. Individuals whose titers were above 1080 (labelled red) required further sample dilution. 51.81% of the participants had their antibody neutralisation titers above 40. There was a significant difference between the proportion of clade A viruses neutralised and those of clade D as obtained statistically using the Mann-Whitney test with a p-value <0.0001. The neutralisation titers obtained for the individual clade A viruses Q23.17, Q769.d22 and Q842.d12 were much higher than those for clade D viruses QA013.H1, Q857.B3 and QD435.5B.

**Conclusion**

Generally, the frequency of neutralising antibodies found was to be much higher in Clade A compared to Clade D. This implies that in case of a vaccine design, emphasis should be put on Clade D subtype since it’s harder to neutralise naturally.

**Abstracts**

**LB1.66 DETECTION OF ZIKA VIRUS AND CYTOMEGALOVIRUS IN CERVICAL CYTOLOGY SAMPLES OF PREGNANT WOMEN FROM GUAYAQUIL, ECUADOR, USING TWO REAL-TIME POLYMERASE CHAIN REACTION (RT-PCR) MOLECULAR ASSAYS**

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**Introduction**

Zika virus (ZIKV) infection during pregnancy has been linked to severe birth defects. Human Cytomegalovirus (CMV) has also been related to important congenital problems when present during pregnancy. The epidemiologic situation of the ZIKV epidemic and the prevalence of the CMV in Ecuador is poorly understood. Given the well-documented effects of ZIKV and CMV in pregnancy, we tested for the incidence of ZIKV infection and CMV infection in the lower reproductive tract.

We report the identification of a population of pregnant women with a high incidence of ZIKV infection and CMV infection in a distinctive population of pregnant women. We report the identification of a population of pregnant women with a high incidence of ZIKV infection and CMV infection in the lower reproductive tract.

**Methods**

In late 2016, a case control study was performed to determine the incidence of ZIKV infection and CMV infection among low-income, pregnant women at risk for preterm delivery compared to matched controls. Cervical cytology specimens were tested for ZIKV by rRT-PCR using a lab developed, clinically validated assay (ZCD assay) and for CMV using a commercial RT-PCR assay (CMV DiaPro).

**Results**

Fifty-nine pregnant women were enrolled. The incidence of ZIKV was 45.7% (27/59) overall: 15/31 (48.3%) in cases and 12/28 (42.8%) in controls. The general incidence of CMV was 37.2% (22/59): 12/31 (38.7) in cases and 10/28 (35.7) in controls. Overall, outcomes for neonates born to ZIKV-positive and ZIKV-negative mothers were similar. There were no significant differences in the outcomes of neonates born to CMV positive and CMV-negative mothers. However, two neonates were born with microencephaly to case mothers who were ZIKV-positive.

**Conclusion**

We report a high incidence of ZIKV infection (45.7%) and CMV infection (37.2) in a distinctive population in Guayaquil, Ecuador. We identify ZIKV and CMV in cervical samples. These data raise concerns regarding the breadth of the ZIKV epidemic in Ecuador and the importance of CMV infection in pregnant women. Our findings add to the body of evidence of female-male sexual transmission of ZIKV. This data demonstrate the utility of cervical cytology specimens for ZIKV and CMV testing.