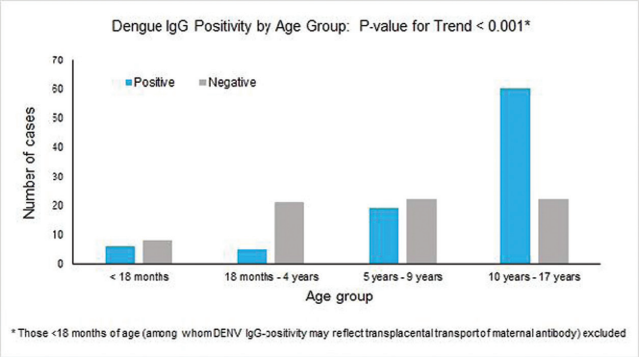
target amplicons. An in-house ELISA was used to ascertain the presence or absence of serum DENV IgG. Trends were assessed using Jonckheere-Terpstra and Chi-square for proportions tests. The Mann–Whitney-Wilcoxon test was used to compare medians. Linear regression modeling was used to determine the association between DENV IgG and ZIKV VL.

Results. Of the 319 individuals who met inclusion criteria, 163 have dengue IgG assays completed to date. Of these, 90/163 (55%) were DENV IgG-positive and 73/163 (45%) were DENV IgG-negative, and did not vary by sex (P = 1.00). However, the proportion of patients with DENV IgG-positivity increased with age (P < 0.001) (Figure). Overall, the median (interquartile range, IQR) ZIKV VL was 23,110 (7,452–84,003), and did not vary by age (P = 0.11) or sex (P = 0.33). However, the median ZIKV VL varied by DPO: 26,230 (DPO<3; n = 117), 15,159 (DPO≥ 3; n = 46), P = 0.002. The median (IQR) ZIKV VLs were: 24,073 (10,938–73,130) in DENV IgG-negative specimens and 22,658 (7,332–89,322) in DENV IgG-positive specimens (P = 0.91). Linear regression indicated no association between DENV IgG and ZIKV VL (P = 0.54).

Conclusion. DENV IgG-positivity increased with age among children with symptomatic ZIKV infection. ZIKV VLs did not vary by age, but decreased with increasing DPO. There was no association between DENV IgG and ZIKV VL.



Disclosures. **All authors:** No reported disclosures.

842. Challenges of Zika Virus Testing in Pregnancy in the Setting of Local Mosquito-Borne Transmission

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Session: 78. Zika Virus

Thursday, October 5, 2017: 12:30 PM

Background. Zika Virus (ZIKV) infection in pregnancy is a major clinical concern. The CDC recommended that pregnant women living in an area with a ZIKV travel notice undergo ZIKV screening in the first and second trimesters of pregnancy. This study investigated the consequences of this screening on clinical management.

Methods. An IRB approved retrospective chart review was conducted using laboratory records of ZIKV testing on pregnant patients from January through December 2016 at multiple tertiary care centers in Miami, FL. Serum and/or urine samples were collected, based on CDC guidelines at the time, and evaluated for PCR and/or IgM evidence of ZIKV infection. Positive ZIKV PCR results indicated acute phase of infection. Previous infection was suggested by positive IgM antibody, but required confirmatory ZIKV plaque reduction neutralization testing (PRNT) testing due to IgM antibody cross reactivity with other flaviviruses.

Results. During 2016, 2,327 pregnant women were screened for ZIKV infection. At the peak in August 2016, 607 (26%) patients were tested and only 31 (5.1%) tests resulted within the month. Of those screened, 113 (4.85%) women tested positive for ZIKV PCR and/or IgM. In October 2016, 40 (35.4%) positive screening tests were received, the most positives resulting in a month. Confirmatory ZIKV PRNT testing was performed on those who were ZIKV IgM positive and PCR negative, with a total of 92 results received. Eighty-eight women were considered positive, 49 confirmed with positive titers (≥10). There were 28 women with negative titers (< 10), thus a false positive ZIKV screening rate of 30.4%, and 15 results were pending. Of women with false positive IgM screening, a median of 1 (range 0–4) additional ultrasound was done between receipt of the initial positive ZIKV screening and the subsequent receipt of the negative PRNT testing. Delays of results led to 21 (24%) positive tests reported after delivery and hospital discharge. Additionally, 18 (20.5%) women who tested PRNT positive had their originating sample drawn during admission for delivery with results available only after discharge.

Conclusion. Both delays in ZIKV testing results and false positive screening with ZIKV IgM led to challenges in counseling and clinical care of pregnant women living in an area of ongoing ZIKV transmission.

Disclosures. **All authors:** No reported disclosures.

843. Efficacy of Galidesivir against Ebola Virus Disease in Rhesus Monkeys

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Background. The recent re-emergence of Ebola virus in the Democratic Republic of the Congo serves as a stark reminder of the 2013–2016 Ebola virus (EBOV), which resulted in >11,000 deaths. To date, there are no approved therapeutics or vaccines for EBOV disease (EVD). Galidesivir (BCX4430) is an adenosine nucleoside analogue designed to inhibit viral RNA polymerase activity indirectly through non-obligate RNA chain termination. Galidesivir exhibits *in vitro* antiviral activity against a broad spectrum of negative- and positive-sense RNA viruses. *In vivo*, galidesivir has shown antiviral activity against various viruses and provides 100% protection against Marburg virus disease in cynomolgus macaques, when administered either 1 or 2 days post infection. Initial exploratory studies in a rhesus macaque model of EVD showed that 25 mg/kg galidesivir administered twice daily (BID) IM beginning immediately following viral challenge protected 100% (6 of 6) of animals.

Methods. Pharmacokinetic modeling based on galidesivir levels in healthy and EBOV-infected animals predicted that a loading-dose regimen could decrease time to steady-state, potentially advantageous when extending the time of treatment initiation. To test the efficacy of a loading dose regimen, 100 mg/kg was administered BID either 2 or 3 days after challenge, followed by maintenance doses of 25 mg/kg BID for a total duration of 11 days.

Results. Six of 6 (100%) rhesus monkeys survived after receiving loading doses on day 2, and 4 of 6 (67%) animals survived after receiving loading doses beginning day 3. In the dosing regimen that conferred 100% protection, the animals exhibited either no behavioral depression or only mild and transient behavioral depression. In all treated groups, there was a significant reduction of plasma viral RNA concentrations during the acute phase of disease.

Conclusion. Galidesivir protects rhesus monkeys against an otherwise lethal EBOV challenge. Administered by IM injection, Phase 1 human clinical studies of single and multiple ascending doses have shown galidesivir to be generally safe and well tolerated up to 10 mg/kg daily for seven days. Additional clinical studies are planned to evaluate the safety and tolerability of galidesivir administered by IV infusion. Supported by NIAID (NIH), HHSN272201300017C.

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844. Zika Virus Serologic Diagnosis by NS1 ELISA in Curacao

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Background. Zika virus (ZIKV) was introduced in the Caribbean island of Curacao in January 2016. A commercially available ZIKV IgM and IgG ELISA was evaluated on patients that were PCR-positive for ZIKV.

Methods. ZIKV infection was established by PCR in urine samples. Samples from PCR-positive patients were selected for validation of a ZIKV NS1 IgG and IgM ELISA. Patients with a follow-up sample ≥ 2 weeks after initial presentation were used to assess the sensitivity of the assay. Samples of 15 historical controls with serological evidence of Dengue, Chikungunya or an unrelated viral infection were included to establish specificity and cross-reactivity.

Results. Fourteen patients with positive ZIKV PCR diagnosis had repeated serum samples drawn ≥ 2 weeks after the initial sample. The combined results of these repeated IgM and IgG tests resulted in a sensitivity of 92%. One pregnant female showed no presence of IgG or IgM in any of the two samples. Testing of the panel of historical ZIKV-negative controls resulted in a specificity of 100% in both the quantitative and semi-quantitative setting of the ELISA. One patient with known high-titers of antibodies against Chikungunya virus in the respective panel displayed borderline reactive results for ZIKV IgG in both quantitative and semi-quantitative setting of the assay.

Conclusion. In this PCR-positive ZIKV cohort of patients, the newly available ZIKV NS1 ELISA displayed excellent performance characteristics. Cross-reactivity was indicated for Chikungunya in one case. No cross-reactivity was found for Dengue virus infection. One pregnant female showed no signs of developing anti-ZIKV IgM or IgG in this study. In the light of intrauterine pathogenesis, the lack of development of maternal IgG during ZIKV infection is a concern.