Prevalence of and Factors Associated with Clostridium difficile Co-infection Among Patients with Candidemia, United States, 2014–2016

Sharon Tsay, Centers for Disease Control and Prevention
Kaitlin Benedict, Centers for Disease Control and Prevention
Zintars G. Beldavs, Oregon Health Authority
Monica Farley, Emory University
Lee H. Harrison, Maryland Emerging Infections Program
William Schaffner, Vanderbilt University
Taryn Gerth, Centers for Disease Control and Prevention
Tom Chiller, Emory University
Snigdha Vallabhaneni, Centers for Disease Control and Prevention

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1781. Galidesivir, a Direct-Acting Antiviral Drug, Abrogates Viremia in Rhesus Macaques Challenged with ZIKV Virus

So-Yon Lim, PhD1; Christa Osuna, PhD1; Elsa Chen, M.Sc.1; Gyeol Yoon, M.Sc.1; Ray Taylor, MBA2; Steve MacLennan, PhD2; Michael Leonard, PhD2; Enzo Giuliano, PhD2; Amanda Mathis, PhD2; Elliot Berger, PhD2; Ys Babu, PhD2; William Sheridan, MB BS2 and James Whitney, PhD3,4; Beth Israel Deaconess Medical Center, Boston, Massachusetts; BioCryst Pharmaceuticals Inc., Durham, North Carolina; 3Ragon Institute of MGH, MIT, and Harvard, Cambridge, Massachusetts

Session: 217. Zika - A to Z
Saturday, October 7, 2017: 8:30 AM

Abstract

Background. ZIKV infection in humans is associated with serious neurological and reproductive complications. No antiviral or protective vaccine is yet available. Galidesivir, an adenosine analog is a potent viral RNA-dependent RNA polymerase inhibitor with demonstrated broad-spectrum antiviral activity. Methods. We have conducted four pre-clinical studies in rhesus macaques to assess the safety, antiviral efficacy and dosing strategies of galidesivir against ZIKV infection. Results. Collectively, we have evaluated 70 rhesus macaques by IV or SC ZIKV challenge using 1x10^4 TCID50 of a Puerto Rican ZIKV isolate. We have evaluated galidesivir therapy administered via IM injection as early as 90 minutes up to 72 hours after subcutaneous (SC) ZIKV challenge, and as late as 5 days after intravaginal (IVAG) challenge. In these studies, we evaluated the efficacy of a range of loading and maintenance doses of galidesivir. The highest dose evaluated has been a loading dose of 100mg/kg BID followed by a maintenance dose of 25mg/kg BID for nine days. In all challenges, we observed no viral viremia or significant reductions in ZIKV RNA in bodily fluids. Animals treated with galidesivir later (up to 72 hours) were partially protected; they had detectable ZIKV RNA plasma, but the onset was delayed and magnitude reduced compared with controls. Animals infected with IVAG were protected by galidesivir treatment up until day 5 after infection, with no blood viremia and significant reductions in ZIKV RNA in the CSF as compared with controls.

Conclusion. Galidesivir dosing in rhesus macaques was well-tolerated and offered significant protection against ZIKV infection. These results warrant continued study and clinical evaluation.


1782. Outcomes of women with laboratory evidence of Zika infection in pregnancy

Naimi Gamartere, BS1; Michelle Barlett, BA1; Anise Crane, BS1; Samantha Greissman, BA, MPH1; Jacyn Kral, BA1; Meghan Lardy, BS1; Michelle Picon, MD1; Rebecca Starker, BS2; Colette Tse, BA1; Patricia Rodriguez, MD3,4; Ivan Gonzalez, MD1,2; Christine Curry, MD, PhD5,6; 1University of Miami Miller School of Medicine, Miami, Florida; 2Jackson Memorial Hospital, Miami, Florida

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Abstract

Background. Zika virus (ZIKV) infection in pregnancy is a global health concern. With onset of local transmission, obstetricians in Miami-Dade County, Florida (2006–2012), New York (2006–2011), and California (2004–2010). Cost of screening was compared with the cost of inpatient hospitalization. Results. Among 42,634 adult SOT recipients, 158 (0.37%) developed cryptococcosis at a median time of 15.5 months (range 0.1 – 80) after transplant. During the 43 month follow-up, there was approximately 2.5% annual mortality. The estimated costs of care for cryptococcal meningitis per person is approximately $70,000 in 2016 with current explosive cost of fluocytosine at $29,000 per 2 weeks. Thus, the total estimated cost of hospital care in the cohort would be $11.0 million in 2016. In comparison, the cost to screen all 42,634 SOT recipients every three months would be $8,8 million. CRAG screening could detect 75% of asymptomatic cryptococcal antigenemia prior to symptomatic disease requiring prolonged hospitalization, it would be approximately cost neutral ($11.5 million), and even cost saving if above 80% of hospitalizations are averted. Alternatively stated, for every one hospitalization avoided, 4245 patient years could be saved for similar cost and likely better outcome.

Conclusion. Assuming the ability of routine screening to identify 75% of patients who would develop invasive cryptococcosis; CRAG screening every 3 months among SOT recipients likely would be at least cost neutral to the healthcare system. Antecedent duration of cryptococcal antigenemia prior to symptomatic disease in Non-HIV/SOT cohorts to inform optimal screening intervals should be further studied. Prospective SOT cohorts should validate this approach to save lives in a cost-effective manner.

Disclosures. All authors: No reported disclosures.