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

Journal Title: Open Forum Infectious Diseases
Volume: Volume 4, Number suppl_1
Publisher: Oxford University Press (OUP) | 2017-10-04, Pages S55-S55
Type of Work: Article | Final Publisher PDF
Publisher DOI: 10.1093/ofid/ofx162.127
Permanent URL: https://pid.emory.edu/ark:/25593/s6g32

Final published version: http://dx.doi.org/10.1093/ofid/ofx162.127

Copyright information:
© The Author 2017. Published by Oxford University Press on behalf of Infectious Diseases Society of America. This is an Open Access work distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Accessed December 7, 2018 2:34 AM EST
1779. Prevalence of and Factors Associated with *Clostridium difficile* Co-infection Among Patients with Candidemia, United States, 2014–2016

Sharon Tay, MD;2, Kai Lin Benedict, MPH;2 Zintars G. Beldavs, MS;3 Monica M. Farley, MD, FIDSA;2 Lee H. Harrison, MD;3 William Schaffner, MD, FIDSA, FIDSA;2,3,4,5,6,7,8,9 Taryn Gerberich, MPH;9 Tom Chiller, MD, MPH;9 Soudha Vallabhani, MD, MPH;1 Mycotic Diseases Branch, Centers for Disease Control and Prevention, Atlanta, Georgia;2,3,4,5,6,7,8,9 Epidemic Intelligence Service, Centers for Disease Control and Prevention, Atlanta, Georgia;2,3,4,5,6,7,8,9 Oregon Health Authority, Portland, Oregon;9 Oregon Emerging Infections Program, Portland, Oregon;9 Georgia Emerging Infections Program, Atlanta, Georgia;9 Department of Medicine, Emory University School of Medicine and Atlanta VA Medical Center, Atlanta, Georgia;9 Maryland Emerging Infections Program, Baltimore, MD;1 Johns Hopkins Bloomberg School of Public Health, Baltimore, MD;1 Vanderbilt University School of Medicine, Nashville, Tennessee;1 Tennessee Emerging Infections Program, Nashville, Tennessee

Session: 216. The Fungus Among us – Clinical Advances

Saturday, October 7, 2017: 8:30 AM

**Background.** Candidemia and *Clostridium difficile* infection (CDI) are two common healthcare-associated infections (HAIs) and share risk factors such as antibiotic use and prolonged hospitalization. CDI and CDI treatment disrupt gut microbial diversity, allowing *Candida* overgrowth and translocation to the bloodstream. We describe CDI co-infection among patients with candidemia.

**Methods.** Population-based surveillance for candidemia was conducted through CDC's Emerging Infections Program during 2014–2016. A case of candidemia was defined as a blood culture positive for *Candida* species collected from a surveillance area resident. Demographic and medical information, including occurrence of CDI, was collected. We defined co-infection as CDI within 90 days of candidemia and performed bivariable analysis to assess factors associated with co-infection.

**Results.** Among 2129 cases of candidemia, 190 (9%) had CDI co-infection; 116 (5%) had CDI in the 90 days before candidemia (median: 10 days) and 60 (3%) had CDI following candidemia (median: 8 days). The median age of those with CDI-candidemia co-infection was 61 years and 100 (53%) were male. Compared with candidemia alone, the odds of CDI-candidemia co-infection was significantly greater for patients of black race, age >65 years, and hospitalizations were averted. Alternatively stated, for every one hospitalization avoided, 4245 dollars was saved. The median duration of cryptococcal antigenemia prior to symptomatic disease in non-HIV/SOT cohorts should validate this approach to save lives in a cost-effective manner.

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

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

So-Yon Lim, PhD1; Christa Osuna, PhD1; Jessica Lakritz, 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 BS and James Whitney, PhD3; Beth Israel Deacoss Medical Center, Boston, Massachusetts; BioCryst Pharmaceuticals Inc., Durham, North Carolina; 2Ragon Institute of MGH, MIT, and Harvard, Cambridge, Massachusetts

Session: 217. Zika - A to Z

Saturday, October 7, 2017: 8:30 AM

**Background.** Zika virus (ZIKV) was first isolated from a sentinel rhesus monkey in 1947. ZIKV infection in humans is associated with serious neurological and reproductive complications. No antiviral or protective vaccine is yet available. Galidesivir is 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 evaluate galidesivir antiviral efficacy and dosing strategies of galidesivir against ZIKV infection. Collectively, we have infected 70 rhesus macaques by various routes including oral, intravenous (IV AG) and 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 100 mg/kg BID followed by a maintenance dose of 25 mg/kg BID for nine days. We followed multiple endpoints, including ZIKV RNA levels in plasma, urine, saliva, and cerebrospinal fluid. Immune activation, complete blood counts, chemistries and galidesivir pharmacokinetics were also monitored.

**Results.** Galidesivir was well-tolerated in all studies. All untreated controls developed high level plasma viremia, and had readily detectable ZIKV RNA in CSF, saliva and urine. Animals infected in the first 4 hours after SC ZIKV challenge did not develop plasma viremia and were either negative or had significantly reduced 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 the magnitude significantly 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 Gamarrate, BS1; Michelle Barlett, BA1; Anise Crane, BS1; Samantha Greissman, BA, MPH1; Jacyln Kral, BA1; Meghan Lardy, BS1; Michelle Picon, MD1; Rebecca Starker, BS2; Colette Tie, BA1; Patricia Rodriguez, MD1,2; Ivan Gonzalez, MD1,2; Christine Curry, MD, PhD1,2; University of Miami Miller School of Medicine, Miami, Florida; Jackson Memorial Hospital, Miami, Florida

Session: 217. Zika - A to Z

Saturday, October 7, 2017: 8:30 AM

**Background.** Zika virus (ZIKV) infection in pregnancy is a global health concern. With onset of local transmission, obstetricians in Miami-Dade County, FL,