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

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Table 3. Multivariate analysis of 30-day infection-related mortality

<table>
<thead>
<tr>
<th>OR</th>
<th>p value</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.908</td>
<td>0.031</td>
<td>1.176</td>
</tr>
<tr>
<td>3.038</td>
<td>0.281</td>
<td>0.403</td>
</tr>
</tbody>
</table>

Disclosures. All authors: No reported disclosures.

1779. Prevalence of and Factors Associated with Clostridium difficile Co-infection Among Patients with Candidemia, United States, 2014–2016
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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 co-infection were 1.8 (95% CI 1.1–2.9) for age greater than 50, 2.27 (95% CI 1.45–3.57) for black race (OR 1.41, 95% CI 1.05–1.90), those with diabetes (OR 1.68, 1.24–2.27), pancreatitis (OR 1.91, 1.01–3.61), or solid organ transplant (OR 4.15, 2.09–8.22). Those with co-infection had higher odds of certain healthcare exposures: hemodialysis (OR 2.27, 1.57–3.28), hospital stay in the past 90 days (OR 1.9, 1.37–2.64), ICU admission in the past 14 days (OR 1.78, 1.20–2.66), and central venous catheter (CVC) at the time of candidemia (OR 1.71, 1.19–2.46). There were no significant differences in 30-day mortality or in type of Candida species, although C. parapsilosis was less common in the co-infection group (8% vs. 13%).

Conclusion. Nearly one in ten patients with candidemia also had CDI co-infection. Black race, certain underlying conditions, hospitalization, previous hospitalization, ICU stay, and the presence of a CVC were associated with co-infection. Clinicians should be vigilant for coinfection of CDI and candidemia, particularly in situations with associated risk factors.

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1780. Routine Cryptococcal Antigen Screening in Solid Organ Transplant Recipients: Is It Time to Save Lives and Money?
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Session: 216. The Fungus Among Us – Clinical Advances
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Background. Cryptococcosis affects 1 in 270 solid organ transplant (SOT) recipients with high mortality. In HIV-infected patients, cryptococcal antigen (CRAG) is recommended. No screening guidelines exist for SOT recipients.

Table: 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 months 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 expensive cost of flucytosine 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 cryptoco¬
melia prior to symptomatic disease requiring prolonged hospitalization, it would be approximately cost neutral ($11.5 million), and even cost saving if above 80% of hospi-
talizations are averted. Alternatively stated, for every one hospitalization avoided, 4245 persons could be screened 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 antigenia prior to symptomatic disease in Non-HEV/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.

1781. Galidesivir, a Direct-Acting Antiviral Drug, Abrogates Viremia in Rhesus Macaques Challenged with Zika Virus
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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 reproduc¬tive 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 evaluate antiviral efficacy and dosing strategies of galidesivir against ZIKV infection. Collectively, we have challenged 70 rhesus macaques by various routes including subcutaneous (SC), intraperitoneal (IP), intramuscular (IM), intravenous (IV) and intravesical (IV AG) for the presence of ZIKV viremia and viruria. We have also assessed the safety, antiviral efficacy and dosing strategies of galidesivir against ZIKV infection. Collectively, we have challenged 70 rhesus macaques by various routes including subcutaneous (SC), intraperitoneal (IP), intramuscular (IM), intravenous (IV) and intravesical (IV AG) for the presence of ZIKV viremia and viruria. We have also assessed the safety, antiviral efficacy and dosing strategies of galidesivir against ZIKV infection.

Results. ZIKV viremia was detected in 70% of infected animals following SC and IM infection. Animals infected with ZIKV 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 plasma ZIKV RNA, but the onset was delayed and the magnitude significantly reduced compared with controls. Animals infected with ZIKV 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
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Session: 217. Zika - A to Z
Saturday, October 7, 2017: 8:30 AM

Background. Zika virus (ZIKV) infection in pregnancy is a global health con¬cern. With onset of local transmission, obstetricians in Miami-Dade County, FL, Oral Abstracts • OFID 2017:4 (Suppl 1) • S55

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