Results. Prescribers agreed that RNs should play an important role in AS and described positive experiences when interacting with RNs who actively aimed to improve antibiotic use. While CDC/ANA recommendations were perceived to improve patient care, recommendation-specific challenges were noted to pose important barriers: (1) understanding that RNs are not exclusively responsible for antibiotic allergy histories; (2) possible prescriber pushback if the rationale for an IV to PO switch and the potential severity of the problem locally is not well understood; and (3) competing RN and prescriber schedules and a lack of clearly defined RN roles during antibiotic timeouts. To overcome barriers, prescribers recommended: (1) RNs initiate conversations with prescribers re: questionable drug allergies to facilitate accurate documentation and shared responsibility of drug allergy information; (2) prescriber education and the sharing of local data to address prescriber pushback; and (3) integration of antibiotic timeouts during interprofessional rounds and specified RN responsibilities to ensure meaningful conversation.

Conclusion. Prescribers were receptive to formal RN involvement in AS activities, but noted the successful adoption of CDC/ANA recommendations would require an interprofessional approach.

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

1894. Antimicrobial Stewardship in the Intensive Care Unit: Survey of Critical Care and Infectious Diseases Physicians

M Cristina Vazquez Guillamet, MD[1]; Jason Burnham, MD[2]; Maria Perez, PhD[3]; Marin Kollef, MD, FACP, FCCP[4]; Constantine Manthous, MD[5] and Donna Jeffe, PhD[3]; [1]University of New Mexico, Albuquerque, New Mexico, [2]Washington University in Saint Louis, Saint Louis, Missouri, [3]Washington University in St Louis, St Louis, Missouri, [4]Washington University School of Medicine, St. Louis, Missouri, [5]Lawrence and Memorial Hospital, New London, Connecticut

Session: 223. Antimicrobial Stewardship: Qualitative Research

Saturday, October 6, 2018: 12:30 PM

Background. One aim of antimicrobial stewardship programs is to combat climbing rates of antibiotic resistance. Typically coordinated by Infectious Diseases (ID) physicians, such programs have decreased costs, resistance rates and secondary infections. A point of contention is whether ID or Critical Care (CC) physicians should manage the antibiotics prescribed to critically ill patients in the Intensive Care Unit (ICU). We surveyed ID and CC physicians regarding their perspectives on ICU antimicrobial stewardship and collaborations.

Methods. In 2017, CC and ID fellows and attendings completed an online survey that included 17 Likert-scaled items (1 = strongly disagree to 5 = strongly agree) measuring views on ICU antibiotic stewardship. Principal components analysis (PCA) was used for data reduction. Multivariable linear regression models explored variables associated with outcomes measuring physicians' views on which specialty should guide antibiotic stewardship and the value of clinical collaborations in the ICU.

Results. Of 334 physicians, 71% were attendings (vs. fellows) and 61% were ID (vs. CC) specialists. From the PCA, 3 factors emerged measuring views about: (1) the specialty that should serve as ICU antibiotic stewards (Cronbach's $\alpha = 0.71$; higher scores indicate ID physicians should be stewards); (2) ICU clinical collaborations ($\alpha = 0.60$; higher scores indicate greater value of collaboration); and (3) ICU decision-making insecurity ($\alpha = 0.45$; higher scores indicate greater insecurity). In the regression models ($n = 309$), CC physicians and those placing lower value on ICU collaborations reported greater agreement that ID physicians should be the primary ICU stewards; women and physicians reporting greater ICU decision-making insecurity and less agreement that ID physicians should be ICU antibiotic stewards reported greater value of clinical collaborations.

Conclusion. CC physicians favor ID specialists to assume ICU antibiotic stewardship.

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

1895. The Anti-Parasitic Drug Atovaquone Inhibits Arbovirus Replication

Angelica Kottkamp, MD[1]; Elfie DeJesus, B.S.[2] and Kenneth Stapleford, PhD[2]; [1]Department of Medicine, NYU School of Medicine, New York, New York, [2]Department of Microbiology, NYU School of Medicine, New York, New York

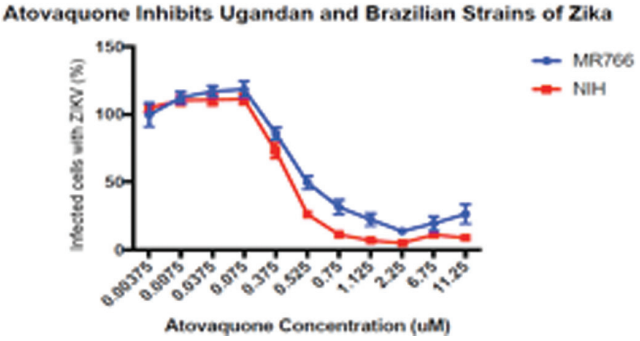
Session: 224. Antiviral Therapies

Saturday, October 6, 2018: 12:30 PM

Background. Atovaquone, a hydroxynaphthoquinone, FDA Pregnancy category C, used for the treatment and prevention of pneumocysits jirovecii pneumonia (PCP), toxoplasmosis, babesiosis and malaria has *in vitro* activity against Zika virus (ZIKV). The mechanism of action against *Plasmodium* spp. and other parasites is based in the inhibition of mitochondrial cytochrome bc1 complex which further collapses parasite–mitochondrial membrane potential. But to date, antiviral activity of this drug has not been described.

Methods. Vero cells (monkey kidney epithelial cells) were seeded. At 24 hours of incubation, the cells were pretreated with ribavirin and brequinar (known antiviral drugs) and atovaquone at different concentrations for 1 hour and then infected with ZIKV Brazilian strain and Ugandan strain, and subsequently treated with drugs again. After incubation for 72 hours virus antigen *Env-protein* production was quantified by immunodetection. The concentration of atovaquone that decreased the level of *Env-protein* production by 50% was calculated by non-linear regression analysis (CC50). Cell viability was measured using the CellTiter 96 aqueous one solution cell proliferation assay (Promega, Madison, WI), according to the manufacturers protocol. Viral infection was rescued adding uracil to Vero cells pre-treated with ribavirin, brequinar and atovaquone. Experiment was repeated with Chikungunya virus (CHIKV).

Results. We found that atovaquone inhibits ZIKV infection in Vero cells at smaller concentration (CC50 = 0.52 μM) than those used for parasitic killing. The effect is more prominent in the Brazilian strain when compared with the Ugandan strain. No cytotoxic effect was found in Vero cells up to 15 μM; above this concentration atovaquone formed crystals. Uracil rescues ZIKV infection after treatment with atovaquone. Atovaquone also inhibited CHIKV infection in Vero cells.



Conclusion. Atovaquone has antiviral activity against ZIKV likely via depletion of nucleotides blocking pyrimidine biosynthesis. Furthermore, the antiviral effect is applicable to other arboviruses which makes atovaquone a broad-spectrum antiviral drug and a potential attractive candidate for the treatment of ZIKV infection in vulnerable population such pregnant women and children.

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

1896. A Retrospective Cohort Analysis to Determine the Incidence of CMV Viremia and Progression to CMV Disease in Pediatric Patients Receiving Allogeneic Hematopoietic Cell Transplantation at an Academic Children's Hospital

Molly Hayes, PharmD, BCPS[1]; Alexander Newman, MD[2]; Craig L.K. Boge, MPH[3] and Brian T. Fisher, DO, MSCE, MPH[4]; [1]Antimicrobial Stewardship Program, The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, [2]Divison of General Pediatrics, The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, [3]Center for Pediatric Clinical Effectiveness, Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, [4]Divison of Oncology, The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, [5]Department of Pediatrics, Division of Infectious Diseases, Children's Hospital of Philadelphia, Philadelphia, Pennsylvania

Session: 224. Antiviral Therapies

Saturday, October 6, 2018: 12:30 PM

Background. There are limited data on incidence of CMV reactivation and safety of anti-CMV prophylaxis in pediatric allogeneic hematopoietic cell transplant (HCT) recipients. We aimed to describe the rate of CMV viremia in patients receiving two different prophylaxis regimens based on risk assessment. The frequency of toxicity from prophylaxis is also reported.

Methods. We assembled a single-center cohort of allogeneic HCT recipients undergoing CMV surveillance testing between January 1, 2014 to June 30, 2017. Subjects were excluded if they were CMV PCR positive in the 30 days prior to HCT. Patients were categorized as high-risk (HR) if the donor product was from a CMV positive patient and they met one of the following criteria: T cell depleted graft, cord blood transplant, or receipt of anti-thymocyte globulin or alemtuzumab. The local CMV prophylaxis pathway recommends all patients initiate standard dose acyclovir on day −7. HR patients transition to foscarnet in the first week post-transplant which is continued until enteral therapy is tolerated. They are then transitioned to valganciclovir, which is continued through day +100. Standard-risk (SR) patients continue acyclovir through day +100. Patients were followed until day +180 for these outcomes: CMV viremia, CMV disease, and CMV prophylaxis related-toxicity.

Results. The cohort included 147 subjects with 44 developing CMV viremia (29.9%). CMV viremia was more common in HR (18/35) as compared with SR (26/112) patients (51.4 vs. 23.2%, $P < 0.01$). The median time to reactivation was also earlier in HR patients (9 vs. 33.5 days, $P = 0.01$). Only two (4.5%) patients with CMV viremia progressed to CMV disease. Toxicity requiring a therapeutic change of an antiviral prophylactic agent was more common in HR (25.7%) vs. SR (8.9%) patients. Renal insufficiency was the most common reported toxicity, followed by electrolyte wasting (figure).

Conclusion. HR HCT recipients had a CMV viremia rate nearly triple the SR group despite a more comprehensive prophylaxis regimen. Few subjects with CMV viremia progressed to CMV disease but toxicities from antiviral prophylaxis were common. Further investigations of novel CMV prophylaxis agents with improved toxicity profile are needed to justify CMV prophylaxis in pediatric HCT patients.