Conclusion: We observed an extremely low RSV pneumonia fatality rate in contrast to that reported in the literature. Perhaps due to strict control of nosocomial transmission, our cohort tended to contract RSV late, which might account for better outcomes. Our low incidence of NIPCs is intriguing, and could be biased by the fact that 66% of our cohort was on ≥ 2 immunosuppressors. Our findings support prompt treatment of high-risk patients with inhaled ribavirin/IVIG to diminish early RSV-related mortality and morbidity.

Incidence of Post-Transplant Bacterial Foodborne Pathogens in Hematopoietic Stem Cell Transplant Patients

Nicole Boyle1, Sara Podczervinski2, Kim Jordan2, Zach Stednick1, Susan Butler-Wu3, Kerry McMillen2, Steven A. Pergam1,2,4. 1 Vaccine and Infectious Disease Division, Fred Hutchinson Cancer Research Center, Seattle, WA; 2 Seattle Cancer Care Alliance, Seattle, WA; 3 Laboratory Medicine, University of Washington, Seattle, WA; 4 Department of Medicine, University of Washington, Seattle, WA

Background: Diarrhea, abdominal pain and fever are common among patients undergoing hematopoietic stem cell transplant (HCT), but such symptoms are also typical with foodborne infections. The burden of disease caused by foodborne infections in patients undergoing HCT is unknown. We sought to describe the incidence of post-transplant bacterial foodborne infections in a single-center population of HCT recipients.

Methods: We reviewed all patients who received a HCT at the Fred Hutchinson Cancer Research Center in Seattle, WA from 2001 to 2011. Data were collected retrospectively using center databases, which include information from transplant, on-site examinations, outside records, and collected laboratory data. Patients were considered to have a bacterial foodborne illness if Campylobacter jejuni/coli, Salmonella, Shigella, Yersinia or Listeria species were isolated in culture; patients with evidence of non-foodborne origin for infection were excluded. All post-transplant events were classified as early (<100 days post-transplant) or late (>100 days).

Results: A total of 18/4404 (0.4%) patients developed a post-transplant bacterial foodborne illness (Figure 1). Patients had a mean age at infection of 45.8 years (range 1–68), and the majority were adults (85 years of age (n=14 [78%]), and male gender (n=13, [72%]). Most cases occurred in patients who had undergone an allogeneic transplant (n=12 [67%]). These infectious episodes occurred at a median of 87.5 days after transplant (IQR 19, 367). The overall incidence rate post-transplant was 0.34 per 100,000 patient days, and 1.9 per 100,000 in the early post-transplant period. Bacterial foodborne infections occurred evenly between the early and late periods (n=9 early, n=9 late). The most frequent pathogen detected was Campylobacter (n=9 [50 %]) followed by Salmonella (n=5 [28%]), Yersinia (n=2 [11%]) and Listeria (n=2 [11%]); no cases of Shigella were detected. Diagnoses were made in most patients through positive stool cultures (n=13 [72%]), while a smaller proportion were first positive through blood cultures (n=4 [22%]); one patient was positive simultaneously at both sites. Mortality due to bacterial foodborne illness was not observed during follow-up.

Conclusions: Our large single-center study indicates that bacterial foodborne infections were a rare complication following HCT. These data provide important baseline incidence for future studies evaluating dietary interventions in HCT patients.

Tolerability of Daily Micafungin Antifungal Prophylaxis in High Risk Pediatric Patients Undergoing Hematopoietic Cell Transplantation for Non-Malignant Disorders

David Buchbinder1, Steven M. Neudorf1, Felice Adler2, Negan Ashouri4, Carla Daum1, Loan Hsieh1, Van Huynh1, Ivan Kirov1, Edna Klinger1, Nancy Kurtz1, Delma Nieves2, Diane Jean Nugent1, Geetha Puthenveetil1, Elyssa Rubin1, Leonard Sender1, Jasjit Singh2, Amit Soni1, Jill Stites1, Lilibeth Torno1, Antonio Arrieta2, 1 Children's Hospital of Orange County, Orange, CA; 2 Infectious Disease, Children's Hospital of Orange County, Orange, CA; 3 Oncology, UC Irvine Medical Center, Orange, CA

Objective: Invasive fungal infections are a cause of mortality in pediatric allogeneic hematopoietic cell transplantation (allo-HCT) recipients. Prophylaxis with triazoles present a challenge in patients with non-malignant disorders due to pre-HCT risk for organ dysfunction. Micafungin is an echinocandin with activity against Candida and Aspergillus species. Limited toxicity and drug interactions of micafungin make this an attractive option. Limited experience has been reported in pediatric HCT patients with non-malignant disorders. We report our experience with daily micafungin antifungal prophylaxis in pediatric allo-HCT patients with non-malignant disorders.

Methods: A retrospective descriptive analysis of 28 pediatric patients with a variety of non-malignant disorders undergoing allo-HCT and prophylaxis with micafungin is provided. The median age at allo-HCT was 5 years (range, 0.4–11). No patient had a previous invasive fungal infections, hepatic, or renal dysfunction except for one patient with hepatic fibrosis. Cyclosporine was used for graft-versus-host disease prophylaxis.

Results: Table 1 provides a summary of results associated with daily micafungin antifungal prophylaxis. Micafungin was discontinued in one patient due to liver function test abnormalities. A baseline elevation in AST, ALT, and bilirubin was documented in 25%, 39%, and 0% of patients; respectively. There was a two-fold increase in AST, ALT, and bilirubin in 60%, 67%, and 85% of patients during treatment; these decreased on therapy. A similar trend was noted in renal function. Cyclosporine levels did not fluctuate significantly during therapy.

Conclusion: Daily micafungin prophylaxis is a well-tolerated method which may prevent fungal infections in pediatric allo-HCT patients with non-malignant disorders. Further study of micafungin prophylaxis to evaluate the efficacy of micafungin in the prevention of fungal infections in pediatric allo-HCT recipients with non-malignant disorders is needed.