1601. Effect of Preemptive Rituximab Therapy on Epstein-Barr Reactivation in Allogeneic Hematopoietic Stem Cell Transplant Recipients

Gaud Catho, MD;* Daniel Shead, MSc;† Pierre Teixe, MD, MSc;‡ Christian Renaud, MD, MSc;‡,§ Fréchette, MD;¶ Lisa Kakinami, PhD;¶,§,∥ Philippe Overtchkine, MD, MSc;¶ and Julie Autrimitiguié, MD, MSc;¶,∥ Infectious Diseases Division, Department of Pediatrics, CHU Sainte-Justine, Université de Montréal, Montréal, QC, Canada, †Infectious Diseases, Geneva University Hospital-University of Geneva, Geneva, Switzerland, ‡Department of Mathematics and Statistics, Concordia University, Montreal, Montreal, QC, Canada, §Onco-Hematology Division, Department of Pediatrics, CHU Sainte-Justine, Université de Montréal, Montréal, QC, Canada, ‌Microbiology and Immunology, CHU Sainte-Justine, Université de Montréal, Montréal, QC, Canada, ¶Department of Pharmacology and Physiology, University of Montreal, Montreal, QC, Canada, ‡Research Center, CHU Sainte-Justine, Université de Montréal, Montréal, QC, Canada

Session: 151. Viruses and Bacteria in Immunocompromised Patients
Friday, October 5, 2018: 12:30 PM

Background. Epstein-Barr virus (EBV) viremia after hematopoietic stem cell transplantation (HSCT) are at increased risk of post-transplant lymphoproliferative disease (PTLD). Our aim was to assess whether preemptive rituximab reduced EBV-viral load (EBV-VL) and the risk of developing PTLD.

Methods. We retrospectively included all children who had a positive EBV-VL within 12 months after an allogeneic HSCT (2007–2015) in a single tertiary pediatric hospital. Whole blood EBV-VL was monitored weekly using a real-time PCR, during the first 100 days after HSCT and then monthly until 6 months post-HSCT or until EBV-VL became undetectable. EBV-VL clearance was defined as two negative EBV-VL at least 7 days apart.

Results. Of 214 children who underwent allogeneic HSCT, EBV DNA was detected in 87 (41%) children. Children who received rituximab after diagnosis of PTLD were excluded, leading to a cohort of 78 children. Twenty-two (28%) children received pre-emptive rituximab. Mean (SD) age was similar in both groups (10 [5] years). First post-transplant positive EBV-VL was earlier in the pre-emptive rituximab group (mean of 55 [54] vs. 113 [96] days; P < 0.005) and first positive EBV-VL was higher in the pre-emptive rituximab group (mean of 3.4 [0.6] vs. 3.0 [0.6] log10/mL; P < 0.005).

In adjusted analyses, preemptive rituximab was associated with a higher likelihood of EBV-VL clearance (hazard ratio 1.86; 95% confidence interval 1.10–3.14; Figure 1). Of the 10 children who developed PTLD, none had received pre-emptive rituximab.

Conclusion. EBV viremia is frequent in children with allogeneic HSCT. Our results suggest that pre-emptive rituximab is associated with more rapid EBV-VL clearance.

Figure 1. Inverse probability of EBV viremia clearance in children.

Disclosures. R. Miller, scynexis: Investigator, Research support.

1602. Clostridium difficile Infection as a Predictor of Acute Graft vs. Host Disease Among Allogeneic Stem Cell Transplant Recipients

Ra’Ed Jabr, MBBChB;* Leyla Shana, MD;† Wissam El Atrouni, MD, MSc;‡ Mohammad Telfah, MD;§ Guangyi Gao, MS;¶ Jianghua He, PhD;¶ Lisa Clough, MD;♪ Department of Internal Medicine, Division of Infectious Diseases, University of Kansas Medical Center, Kansas City, KS, †Department of Internal Medicine, Division of Hematology/Oncology, University of Kansas Medical Center, Kansas City, Kansas, ¶Department of Biostatistics, University of Kansas School of Medicine, Kansas City, Kansas

Session: 151. Viruses and Bacteria in Immunocompromised Patients
Friday, October 5, 2018: 12:30 PM

Background. Clostridium difficile infection (CDI) is a major cause of infectious diarrhea especially among allogeneic stem cell transplant (SCT) recipients. The relationship between CDI and acute graft vs. Host Disease (aGvHD) has been a topic of great interest for some time, as either of the two conditions may affect the other. We studied the temporal relation of CDI on aGvHD in the first 100 days posttransplant in a large cohort of allogeneic SCT recipients.

Methods. We conducted an analysis of retrospective data extracted from the medical records of adult patients (more than 18 years of age) who underwent their first allogeneic SCT between January 1, 2010 and December 31, 2016 at the University of Kansas Health System. Patients were followed for CDI events between day –10 to day +10 and staging of aGvHD were determined based on standardized aGvHD grading scale utilizing clinical and pathological information between day 0 and day +100. Analysis included descriptive statistics, multivariable logistic regression, and survival analysis with CDI as a time-dependent variable.

Results. A total of 656 allogeneic SCT recipients were included in the analysis. Of the total sample, 419 (64%) developed aGvHD within the first 100 days. CDI was observed in 112 (17%) of all allogeneic SCT recipients, 72 (64%) of CDI cases developed prior to the onset of aGvHD. Fidaxomicin was used in the treatment of 57 (79%) cases, vancomycin was used in 53 (74%) of CDI cases. On unad- justed analysis, CDI was associated with aGvHD (P = 0.0736), high grade aGvHD (P = 0.0132), and GI aGvHD (P = 0.0003). On multivariate survival analysis, the following predictors were associated with aGvHD: CDI (adjusted Hazard Ratio (aHR) = 1.44, P = 0.0047), matched unrelated donor vs. matched related donor transplant type (aHR = 1.40, P = 0.0023), myeloablation vs. reduced intensity conditioning (aHR = 1.87, P < 0.0001). This was consistent with the stepwise logistic regression model.

Conclusion. Allogeneic SCT recipients with CDI have a higher risk of aGvHD compared with those without CDI.

Disclosures. All authors: No reported disclosures.

1603. Our Experience With M. marinum Cutaneous Infections in Three Patients Receiving Anti-TNFα

Nabil Zinededdine, MD;* Melissa Tryouhy, MD;† Todd Braun, MD;‡ Division of Infectious Diseases and HIV Medicine, Drexel University College of Medicine, Philadelphia, Pennsylvania, †Infectious Disease, Abington Memorial Hospital, Abington, Pennsylvania

Session: 151. Viruses and Bacteria in Immunocompromised Patients
Friday, October 5, 2018: 12:30 PM

Background. TNFα inhibitors are a well-known risk factor for active tuberculosis but less is known about the link between TNFα inhibitors and other mycobacterial diseases, particularly M. marinum. With the increase in use of these medications, and the trend toward more outdoors activities that include aquatic environment exposure, focus should be on better understanding of the link between use of TNFα inhibitors and the development of a severe M. marinum infection that might require earlier diagnosis and more aggressive antibiotic therapy.

Methods. We will describe our experience with three cases of aggressive cutaneous M. marinum infection in patients taking anti-TNFα that presented to Abington Memorial Hospital in Pennsylvania between 2014 and 2017.

Results. Age, gender, diagnosis.

Disclosures. All authors: No reported disclosures.