372

Use of Leflunomide in the Treatment of Recalcitrant CMV Infection in Immunocompromised Patients

Nobuyoshi Mori [1], Jakapat Vanichanan [1], Frank Tverdek [1], Jean Tayar [2], Ella Ariza-Heredia [1], Victor E. Mulanovich [1], Roy F. Chemaly [1]. [1] Department of Infectious Diseases, Infection Control & Employee Health, The University of Texas MD Anderson Cancer Center, Houston, TX; [2] Department of Rheumatology, The University of Texas MD Anderson Cancer Center, Houston, TX

Background: CMV infection resistant or refractory to the standard antiviral therapy constitutes a major threat to immunocompromised patients, especially leukemia or hematopoietic stem cell transplant (HSCT) patients. In addition, treatment of CMV recurrences may lead to myelosuppression or renal insufficiency due to adverse effects of ganciclovir derivatives or foscarnet. Leflunomide, a drug originally approved for rheumatoid arthritis, has been reported to have anti-CMV activity. We report our experience with leflunomide therapy in patients with recalcitrant CMV infection.
Methods: A Single center, retrospective study of 4 patients following HSCT and 1 patient with leukemia. Clinical data were extracted from the electronic medical record. CMV antigenemia (CMV-Ag) was performed for diagnosis of CMV reactivation.
Results: After genotypic analysis, 2 isolates had UL97 and UL54 mutations, 1 had UL97, 1 showed no mutations, and in 1 isolate, genotyping was not performed. Interestingly, 4 of 5 patients had no end-organ diseases, while 1 had CMV pneumonitis. Leflunomide was used in combination with ganciclovir derivatives or foscarnet in 4 patients, while it was used alone in 1. Leflunomide at an average dose of 30mg/day was initiated at mean CMV Ag of 2078 cells (range: 194-6888) and serum level was around 30 mcg/mL in most of the patients. Complete clearance of CMV Ag was observed in 4 patients and the mean duration from start of leflunomide to clearance was 40 days (26-73 d) and no one progressed to end-organ disease. The remaining patient with CMV pneumonitis expired with respiratory failure before CMV Ag was cleared, however, CMV Ag dropped from 2592 to 47 cells at 36 days after initiation of leflunomide. No adverse events related to leflunomide use were observed.
Conclusion: Leflunomide, alone or in combination with ganciclovir derivatives or foscarnet, could be a useful alternative therapy of resistant or refractory CMV reactivation although time to response is prolonged. Its usefulness in patients with end-organ disease still needs to be determined.

373

Allogenic (Allo) Stem Cell Transplant (SCT) in Patients over Age 70 Years: A Single Center's Experience

Zeina Al-Mansour [1], Jan Cerny [2], Muthalagu Ramanathan [3], Glen Raffel [4], Mridula George [5], Laura Petrillo-Deluca [6], Lindsey Shanahan [7], Jayde Bednarik [8], Zankar Desai [9], Aimee Kroll-Desrosiers [10], Rajneesh Nath [6]. [1] Hematology & Oncology, University of Massachusetts, Worcester, MA; [2] Division of Hematology/Oncology, University of Massachusetts, Worcester, MA; [3] Hematology/Oncology Section BMT, UMASS Memorial University Campus, Worcester, MA; [4] Hematology/Oncology Section BMT, UMass Medical Center, Worcester, MA; [5] Department of Medicine, UMass Medical Center, Worcester, MA; [6] Hematology/Oncology, UMass Memorial Medical Center, Worcester, MA; [7] Hematology/Oncology - BMT, UMass Memorial Medical Center, Worcester, MA; [8] Pharmacy, UMass Memorial Medical Center, Worcester, MA; [9] Stem Cell Laboratory, University of Massachusetts Medical Center, Worcester, MA; [10] University of Massachussets, Worcester, MA

Background: Allo SCT can be curative in patients with hematologic malignancies. However, its utilization in the elderly population has been limited because of concerns of mortality associated with it.
Methods: We retrospectively analyzed the outcomes of all patients over age 70 years who underwent Allo- SCT at UMass Medical Center since 2010.
Results: 18 patients (12 males; 6 females) were identified from the database. Median age was 72.5 years (range 70 – 84). Six (33%) were over age 75 years. Median hematopoietic stem cell transplant co-morbidity index was 4 (range 0 - 9). Diagnoses were acute myeloid leukemia (n=10), myelodysplastic/myeloproliferative syndromes/ (n=7), chronic lymphoblastic leukemia (n=1). Eight (44%) of the patients had persistent disease at the time of transplant. Median time from diagnosis to transplant was 208.5 days (77.0 – 3959.0). All patients received stem cells from an unrelated donor with the source being peripheral blood (n=14), cord blood (CB) (n=3) and bone marrow (n=1). Preparative regimens were reduced intensity (RIC) (n=17) and ablative (n=1). CB transplant regimen consisted of Thiotepa (5-10 mg/kg), Fludarabine (Flu), and Melphalan (100-140mg/kg). RIC regimen included Flu, and Busulfan (Bu) (3.2mg/kg x2). One patient received myeloablative regimen: Flu and Bu (3.2mg/kg x 3). HLA match was 4/6 for CB recipients and 10/10 for unrelated donor recipients. Graft-versus-host disease (GvHD) prophylaxis was calcineurin inhibitor/mycophenolate mofetil (MMF) (n=15); Sirolimus /MMF) (n=2) and Sirolimus with post transplant cyclophosphamide (n=1). Seventeen (94%) patients also received peri-transplant antithymocyte globulin. Median CD34 dose infused was 5.0x10e6/kg (range 0.03 – 6.00). Median time to neutrophil engraftment was 17 days (range 13 – 30). Median time to platelet engraftment was 15 days (range 0 – 56). Median length of hospitalization was 19.5 days (range 13 – 49). The 100-day and 1-year non-relapse mortality (NRM) were 16.7% (CI 4.4 – 51.8%) and 35.2% (CI 14.9 – 69.0%) respectively. Cumulative incidence of acute GvHD at day 100 was 36.4%. For patients surviving beyond 6 months (n= 9), cumulative incidence of chronic GvHD was 44.4%. There was no acute or chronic GvHD in the three CB transplant recipients. Median follow-up of surviving patients was 477.0 days (21 – 1288). Kaplan Meier estimate of one and two year overall survival rate was 54.2% (CI 25.0-76.2%).
Conclusion: Allo-SCT can be safely performed in selected patients over age 70.