6/6 matched A/B/DRB1 typed donors. The strategy of selecting A/B only typed donors may pose a different success rate given the scenario of a patient search with one or more existing A/B/DRB1 matched donors, as this implies a more frequent HLA phenotype. While the probability of finding a 6/6 allele matched donor from the A/B only pool is likely very low, the possibility does exist, even when a patient's A/B/DRB1 phenotype is uncommon. With the low incidence of success, the strategy of pursuing A/B only typed donor testing may be best accomplished in conjunction with selection of the best mismatched potential donor.

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AN EVALUATION OF PERIPHERAL BLOOD STEM CELL DONATIONS BY ADULT DONORS ≥ 60 YEARS OF AGE

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Introduction: With the increasing age of the stem cell transplant recipient, the age of related donors (RD) has also increased. To determine the stem cell yield and adequacy of collection for donors ≥ 60 yrs, we performed a single center retrospective review.
Methods: The dose of CD34+ cells/kg patient weight in grafts from RDs age ≥ 60 yrs was reviewed from January 2001-March 2011. The grafts included only donations of G-CSF mobilized peripheral blood stem cells (PBSC) a proportion of which were T cell depleted (TCD). TCD was accomplished by CD34+ selection using an automated system and resulted in only a small loss of stem cells. These results are compared to an equal number of grafts obtained from RDs <60 yrs during the same period.
Results: A total of 59 RDs ≥ 60 yrs were identified, median age 63 (range 60-76) yrs. Twenty five RDs were used for conventional grafts, and 34 for TCD grafts without any serious complications. The median dose of CD34+cells/kg from each was 7.2 (range 2.25-21.1) and 8.36 (range 1.74-28.8) x 10^6/kg, respectively. All pts who received these grafts achieved engraftment. During the same period of time, 70 RDs < 60 yrs (range 20-50 yrs) provided similar conventional and TCD grafts for the comparison group. For 27 younger RDs who provided conventional grafts and 43 TCD grafts, the median CD34+/kg cell doses were 8.5 (range 2-26.3) and 8 (range 1.39-28.4.8) x 10^6, respectively.
Conclusions: Adults >60 yrs are the fastest growing segment of the US population. Estimates suggest that in 30 yrs, that group will nearly double, increasing it to approx. 20% of the population. These data support consideration of individuals ≥ 60 yrs as stem cell donors. Further study is needed to demonstrate that donor age does not impact on transplant outcome.

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EPSTEIN-BARR VIRUS-RELATED COMPLICATIONS (EBV-RC) AFTER UMBILICAL CORD BLOOD TRANSPLANTATION (UCBT) FOR ADULT PATIENTS WITH HIGH-RISK HEMATOLOGIC MALIGNANCIES

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Incidence and characteristics of EBV-RC after UCBT are not well established, although an increased risk of EBV-RC has been suggested with the addition of antithymocyte globulin (ATG) to a non-myeloablative conditioning. This study tries to identify incidence and relevant risk factors for the development of EBV-RC in adults with hematologic malignancies undergoing UCBT at a single institution.

Two hundred and thirty consecutive patients (143 males, 87 females) with median age of 34 years (range, 15-59) who underwent single-unit UD-UCBT at Hospital Universitario La Fe from January 1997 until April 2011 were included in the analysis.Seventy five (32%) had acute myeloid leukemia, 75 (32%) acute lymphoblastic leukemia, 28 (13%) chronic myeloid leukemia, 19 (9%) myelodisplasic syndrome, 12 (5%) non-Hodgkin lymphoma, 8 (4%) Hodgkin lymphoma while the remaining 13 patients (5%) had a variety of hematological diseases. All patients received conditioning consisted of thiotepa, busulfan, cyclophosphamide or fludarabine, and ATG. Two-hundred and seven patients received myeloablative conditioning regimen (MAC) while the remaining 23 received RIC with the same schedule but using a reduced dose of thiotepa (5 mg/kg) and IV busulfan (6.4 mg/kg). Cyclosporine and prednisone or cyclosporine and mycophenolate mofetil were used for graft-versus-host disease prophylaxis. Most patients (96%) received an HLA-mismatched single UCB unit with 1 (24%), 2 (71%) or 3 (1%) mismatches with the recipient. At cryopreservation, the median number of total nucleated cells (TNC) was 3 x10^7/kg (range, 1.4-8.5) and median number of CD34+ cells was 1.6 x10^5/kg (range, 0.2-6.8). Eleven patients developed EBV-RC at a median of 67 days (range 36-258). Two patients presenting with EBV viremia received pre-emptive therapy with Rituximab, while the remaining 9 patients died of EBV posttransplantation lymphoproliferative disorder. The overall cumulative incidence (CI) of EBV-RC was 4,8% at 2 years. The CI of EBV-RC was significantly higher in the subset of patients treated with RIC (26% vs 2%; $p < 0.01$) and patients with a diagnosis of Hodgkin lymphoma (50% vs 3%; $p < 0.01$). These results confirm that EBV-RC are relatively rare in adults undergoing UCBT after ATG-containing MAC, however the risk is markedly increased in RIC recipients. Interestingly, a significant risk of EBV-RC for patients with Hodgkin lymphoma undergoing UCBT was also observed.

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HIGHLY SIGNIFICANT IMPACT OF HLA-DRB3 AND -DRB4 MATCHING ON DIFFERENT UNRELATED ALLO-HSCT OUTCOMES: NEW PERSPECTIVES IN THE UNRELATED DONOR SELECTION

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We examined retrospectively in our center the outcome of 30 patients who received unrelated HSCT with a HLA-DRB3 or -DRB4 mismatched donor (study group) and we compared with a cohort of 30 patients (control group) with the same characteristics except for the DRB3 or DRB4 donor mismatching. In the study group, there were 16 patients with 10/10 HLA identical donor among them 11 had a DRB3 mismatch and 5 had a DRB4 mismatch. There were 14 patients with 9/10 HLA identical donor among them 9 had a DRB3 mismatch and 5 had a DRB4 mismatch. In the control group, there were 16 patients with 10/10 HLA identical donor and 14 patients with 9/10 HLA identical donor. After HSCT, 27 (90%) patients in the study group engrafted while 29 (96%) engrafted in the control group. The cumulative incidence of acute GVHD≥2 at 3 months was 37% (95%CI, 28-46) and 30% (95% CI, 22-39) for the study and control groups respectively, with a same cumulative incidence of chronic GVHD at one year of 20% (95%CI, 12-28). At day 90 post HSCT, 17 (63%) patients in the study group were in CR and 25 (86%) in CR in the control group. After a median follow-up of 5 months (range, 0.2-46) and 13 months (range, 0.5-60) for study and control groups respectively, the median OS was 7 months (range, 3-32) and 21 months (range, 11-NR) with a 2-years probability of 25% (95%CI, 12-51) and 41% (95%CI, 25-69) respectively; the median PFS was 3 months (range, 0.2-46) and 10 months (range, 1-60) with a 2-years probability of 16% (95% CI, 6-42) and 37% (95%CI, 21-63) respectively. The cumulative incidence of relapse at 1 year was the same for the two groups with 30% (95%CI, 22-39); the cumulative incidence of TRM at 3 months and 1 year were 17% (95%CI, 10-24) vs. 3% (95%CI, 0-7) and 37% (95% CI, 28-46) vs. 10% (95%CI, 5-16) for study and control groups respectively. The multivariate analysis showed a significant worse OS in 9/10 mismatched patients with or without a DRB3 or DRB4 mismatch (HR = 5.3; [95%CI, 1.6-18] p = 0.006); 10/10 matched patients with a DRB3 or DRB4 mismatch (HR = 3.9; [95%CI, 1.2-12] p = 0.02) and patients not in CR at transplantation (HR = 4.4; [95%CI, 1.6-12] p = 0.004); similarly, the same groups had a worse TRM in multivariate analysis, (HR = 6; [95%CI, 1.5-24] p = 0.02) and (HR = 3.5; [95%CI, 1.02-12] p = 0.04) respectively. In view of the important impact of these loci mismatches on clinical outcome, it should be considered in the unrelated donor selection.