(p = 0.04) and higher HLA disparity (p = 0.04). Variables not associated with CMV reactivation were gender, disease risk (standard vs. high), conditioning regimen, and cell doses defined as total nucleated, CD34 or CD3 cell dose. No factor was associated with CMV reactivation in multivariate analysis. CMV reactivation did not impact incidence of TRM (p = 0.88), relapse (p = 0.62) or survival (p = 0.78). Likewise, CMV reactivation was not associated with risk of acute or chronic GVHD. In summary, this analysis, the largest study to date on CMV reactivation in UCBT patients, suggests that CMV reactivation is similar to that reported for other HSC sources and has little demonstrable impact on transplant outcomes. Perhaps, current CMV prophylaxis and treatment strategies have marginalized the historical significance of CMV in recipients of allogeneic HSC.

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PALIFERMIN FOR PREVENTION OF ORAL MUCOSITIS (OM) IN ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANT (HSCT) USING A FRACTIONATED TOTAL BODY IRRADIATION (FTBI)-BASED CONDITIONING REGIMEN

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OM is a complication of myeloablative therapy followed by HSCT. Severe OM in patients (pts) undergoing HSCT with a FTBI-based conditioning regimen has been reported in up to 80% of pts (Woo et al. Cancer 1993; 72). Palifermin, (PAL, Kepivance®), a recombinant human keratinocyte growth factor, has been shown to reduce the duration and severity of OM in pts undergoing FTBI-based conditioning regimen prior to autologous HSCT (Spielberger et al. NEJM 2004; 351). Benefits of PAL in pts undergoing allogeneic (Allo) HSCT from a related or a matched unrelated donor were evaluated in a comparative, retrospective study. Data on a cohort of pts who received PAL (N = 33) were compared to a cohort of pts who did not (Control: N = 31). Conditioning regimen consisted of FTBI and etoposide. OM was defined as "Mild" and "Severe" based on CTC v2.0 (Mild = grades 1 and 2, Severe = grades 3 and 4). Baseline characteristics for both cohorts were not statistically different in respect to gender, diagnosis, disease status, GVHD prophylaxis regimen, type of donor, and stem cell source. Median age was lower for pts in the control group (44 vs. 34 years, P = 0.01). All pts developed OM with a median duration of 15 days for the PAL cohort and 20 days for the control (P = 0.05). Overall incidence of severe OM by univariate analysis was 55% and 81% for pts in the PAL and control groups, respectively (P = 0.03). Median duration of severe OM among all pts was 2 days (0–28) for those who received PAL and 5 days (0–16) for pts who did not (P = 0.007). Patients in the PAL group received intensive oral care (delivered by certified respiratory therapists) for 11 days (0–30) vs. 15 days (0–47) for pts in the control group (P = 0.02). Median opioid analgesic use attributed to mucositis pain (in morphine equivalents) was 542 (47–6330) mg and 837 (225–18137) mg for PAL and control groups (P = 0.14). Cumulative incidence of acute GVHD grades III and IV was 9% for pts in PAL group and 29% for the control (P = 0.05). Overall probability of 100-day survival for PAL and control cohorts was 93.9% and 77.4% (P = 0.06). No clinically significant differences were observed in duration of TPN use, length of hospital stay, or ICU admissions. When compared, use of methotrexate did not impact the outcomes.

Conclusions: Results suggests that PAL reduced the incidence of severe OM and the duration of all grades of OM, as well as reducing the health resource utilization for prevention and treatment of OM in pts undergoing Allo HSCT.

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COST ANALYSIS OF MOBILIZATION AND AUTOLGOUS TRANSPLANTATION IN PATIENTS WHO RECEIVED AMD3100 AFTER FAILING STANDARD MOBILIZATION

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This retrospective study evaluated the difference in clinical outcomes and costs of mobilization and transplant between pts who achieved sufficient CD34+ cells to proceed to transplant using a standard mobilization regimen (control group) versus pts who had failed previous mobilization regimens and were remobilized with AMD3100 and G-CSF in the compassionate use protocol (CUP). A total of 88 pts in the control group and 36 pts in CUP were evaluated. Following AMD3100 administration, 33 (94%) pts achieved successful mobilization of >2 million/kg CD34+ cells. A median of 3.36×10^6 CD34+ cells/kg (range, 0.51–13.05) were collected in a median of 3 (range, 1–4) apheresis days. In comparison, control pts collected a median of 10.8×10^6 CD34+ cells/kg (range, 1.95–69.32) in a median of 2 (range, 1–6) apheresis days. Twenty-eight CUP pts went on to transplant and had a median day to ANC > 500/μl of 11 days (range, 9–17) and platelets >20,000 /μl of 27 days (range, 13–37). At day 100, 92% of the CUP pts reached engraftment and there were no transplant related mortalities. The control population had a median day to ANC >500/ul of 11 days (range, 8–14) and platelets >20,000/μl of 18 days (range, 9–83). The control group experienced 100% engraftment and one transplant related fatality. Relapse occurred in 14% of the CUP pts and 32 % of the control pts. The median cost of remobilization with AMD3100 was $2,959 less in the CUP pts than the median cost of initial mobilization for the control group, but this was not significantly different between the groups. The median total cost of mobilization in the CUP pts, including initial mobilization costs, was $16,927 more than in the control pts (p<0.0001). In both groups of pts greater than 95% of total transplant costs occurred in the first 30 days of the transplant course. The difference in the total median transplant costs at day 30 in the CUP pts was $7,373 more than in the control pts. (p = 0.0024). CUP pts incurred 91% of total costs and control pts 57% of total costs in the first 30 days. In conclusion, remobilization with AMD3100 + G-CSF allowed a high percentage of patients who failed standard mobilization to subsequently mobilize adequate CD34+ cells and proceed to autologous transplant with acceptable clinical outcomes. Pts who required remobilization also had an increased cost of transplantation because of increased inpatient costs.

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HIGHER COSTS OF UMBILICAL CORD BLOOD (UCB) TRANSPLANTATION COMPARED TO HEMATOPOIETIC CELL TRANSPLANTATION (HCT) USING MATCHED RELATED DONORS (MRD): INFLUENCE OF ENGRAFTMENT AND POST-HCT COMPLICATIONS

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Allogeneic HCT is a complex, resource intense and costly procedure. UCB is an alternative graft source for patients without MRD; however, costs of UCB HCT have not been described. We compared the costs of HCT within the first 100 days among consecutive adult patients (age ≥18 years) who received MRD (N = 130) or UCB (N = 164) HCT from 2004–2006. Patients received either myeloablative (MA; MRD = 67, UCB = 63) or non-myeloablative (NMA; MRD = 54, UCB = 110) conditioning. The four groups were comparable except for a higher proportion of young (age ≤ 50 years) recipients among MA regimens and HLA mismatched grafts among UCB recipients. Cumulative incidence of graft failure was significantly higher among UCB recipients (MA MRD 3%, MA UCB 19%, NMA MRD 0%, NMA UCB 8% [p < 0.01]), as was the median time to neutrophil engraftment (17 days, 23 days, 7 days, 13 days [p < 0.01]). The 100-day probabilities of overall survival (81%, 70%, 78%, 78% [P = 0.95]) and cumulative incidence of TRM (21%, 29%, 20%, 19% [P = 0.55]) were comparable. Cumulative incidence of acute severe GVHD and rates of major post-HCT complications (dialysis, mechanical ventilation and hepatic veno-occlusive disease) were also similar. The median cost per day survived (excluding costs of graft acquisition) was $1016 (interquartile range [IQR] 796–2232) for MA MRD, $2082 (IQR 1306–6219) for MA UCB, $612 (IQR 473–1023) for NMA MRD and $1156 (IQR 616–2472) for NMA UCB recipients, respectively (p < 0.001). For all groups, room-board and pharmacy services were the major contributors to totals costs of HCT. In multivariate analysis adjusting for important patient, disease and HCT related characteristics as well as major post-HCT complications, significant predictors for higher costs within the first 100 days after HCT were MA UCB HCT, graft failure, need for dialysis or mechanical ventilation and