chronic GVHD after immunotherapy with donor cells ± interferon-α. 25 patients are alive in continuous remission at 2–52 months (median 20); 6 with chronic GVHD requiting therapy. The overall survival is 66% (29/44). We conclude that melphalan-TBI is an active conditioning regimen for AML and permits consistent alloengraftment. Although the toxicity is considerable, the risk of relapse is low. Decreasing the TBI to 950 cGy appears to have controlled the toxicity, but the experience is still limited and longer follow-up is required to see if relapse rates increase.

1131 POSTER

EFFECTIVE RECOVERY OF GRANULOPOIESIS AFTER BONE MARROW TRANSPLANTATION BY CONTINUOUS INFUSION OF LENOGRASTIM (RHUG-CSF)

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Randomized study of continuous iv infusion (A) vs 30 min-infusion (B) of G-CSF (5 μg/kg/day) after BMT was conducted in 101 cases with aplastic anemia, acute lymphoblastic leukemia or malignant lymphoma. Both groups had the same distribution of age, disease, stage of BMT and marrow donor. The analysis of 82 allogeneic BMT cases showed that stable recovery (> 500/μl) of peripheral granulocyte was found at 15.59 ± 5.41 days in group A and 19.30 ± 9.36 in group B ($p = 0.05$) after BMT. Multivariate analysis also demonstrated that method of administration (A vs B) was a significant independent factor for granulocyte recovery by multivariate analysis. The median day of platelet recovery to >100,000/μl was day 28 in group A and day 33 in group B. These results indicate that continuous iv infusion is preferred to 30 min-infusion for the administration of G-CSF in BMT cases.

1132 POSTER

G-CSF MOBILIZATION EFFECT ON PSC IN PEDIATRIC MALIGNANCY

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The aim of our multi-center study was to evaluate the mobilization effect of recombinant human granulocyte colony-stimulating factor(rhG-CSF; lenograstim) on peripheral blood stem cells (PSC). Dynamic movements of CD34 positive cells after 6 types of myelosuppressive chemotherapy followed by intravenous administration of rhG-CSF that started from the day at less than 500 per micro-liter of granulocyte and continued 14 days were analyzed in 59 patients with pediatric malignancy (18 of non-Hodgkin's lymphoma, 17 of neuroblastoma, 10 of acute lymphoblastic leukemia and 14 of other solid tumors). The dosage of rhG-CSF was escalated from 2 to 12.5 microgram per kg and following results were obtained; the number of CD34 positive cells was correlated with that of colony forming unit-granulocyte/macrophage ($r = 0.616$) but not with the dosage of rhG-CSF. The type of chemotherapy and duration of granulocyte recovery affected the maximum CD34 positive cell number.

1133 POSTER

COMPARISON BETWEEN CD34+ CELLS AND CFU-GM GROWTH IN LEUKAPHERETIC PRODUCTS OF PATIENTS UNDERGOING CPC TRANSPLANT

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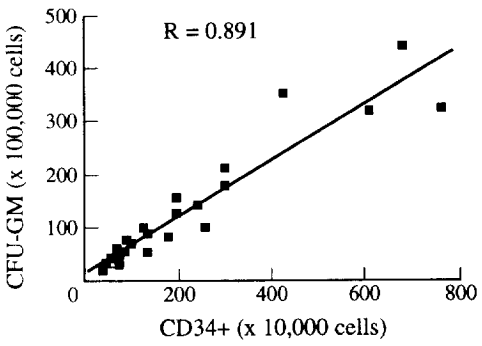
An extremely rapid and complete hematopoietic reconstitution occurs in patients receiving high dose chemotherapy when circulating progenitor cells (CPC), collected by leukapheresis, rather than marrow-derived cells, are reinfused. The amount of progenitor cells collected, which correlates with the speed of bone marrow reconstitution, is usually evaluated by the number of CD34+ cells and/or the number of clonogenic cells (CFU-GM). Since not all investigators agree with the correlation between these two parameters, we have compared CFU-GM growth and CD34+ cells in 27 leukapheresis from patients with solid tumors undergoing CPC transplantation. In our study a clear correlation between the two assays was shown (see fig. below) and we conclude that there is no need to perform both of them. Since CD34+ assay is simpler, less time-consuming and can be completed in a few hours versus weeks, we now perform only immunophenotypic analysis for clinical decision making.



1134 POSTER

IMMUNOTHERAPY FOR ACUTE LEUKEMIA RELAPSING AFTER ALLOGENEIC BONE MARROW TRANSPLANTATION

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8 patients (20–50 years, median 36) relapsing 2–27 months (median 5) after BMT from HLA-matched sibling (n = 3) or unrelated (n = 3), or HLA-mismatched sibling (n = 2) donors were treated with interferon-α (IFN) ± donor cells ± IL-2. The plan was to administer IFN alone first. 100% lymphoid cells and 0–90% myeloid cells were of donor origin at relapse. The diagnoses at BMT were: secondary AML (n = 2), primary refractory AML (n = 3; one relapsing after a previous allograft), AML in first remission (n = 2), and ALL in refractory relapse (n = 1). Marrow from mismatched donors (n = 2) was depleted of T-cells. Response to immunotherapy was not evaluable in 2 patients who died of treatment-related toxicity. Of 6 responders, 2 relapsed and died of toxicity of further therapy, and 1 died of acute hepatic GVHD but with improvement in the clinical signs of the disease. Two other patients developed acute skin GVHD which resolved. 3 patients are alive in remission 2, 8 and 18 months after therapy; all with evidence of chronic GVHD. We conclude that remission can be attained after immunotherapy in acute leukemia relapsing post-allograft, and long-term survival may be achieved. IFN alone may have significant activity, especially with patient-donor HLA disparity (unrelated or mismatch).

1135 POSTER

ABSENCE OF DIFFERENCE BETWEEN BONE MARROW OR PERIPHERAL STEM CELLS AS SOURCE OF HEMOPOIETIC SUPPORT FOR HIGH DOSE THERAPY IN BREAST CANCER

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From March 1992 to August 1994 62 patients received high dose therapy either as intensification for high risk breast cancer (31) or metastatic disease (31). Combination chemotherapy employed was: Cyclophosphamide (1.5 g/m^2 × 4 days), carboplatin (200 mg/m^2 × 4 days continuous infusion) and thiotepa (125 mg/m^2/4 days, continuous infusion). Conventional bone marrow harvested was used as a source of hemopoietic support in 37 patients. In all cases subcutaneous G-CSF was administered from day +1 until neutrophil engraftment at a dose of 5 microg/k/day. In the rest 25 patients G-CSF mobilized peripheral blood stem cells were infused after high-dose therapy. Eleven out of 25 received G-CSF after the transplant in the same schedule than bone marrow transplant patients. The aim of this study was to analyze if there were difference in terms of engraftment, days of hospitalization, and requirements of transfusion between this groups.