transplantation (ASCT) at our institute till december, 2007. Patients' median age was 52 years (range, 26 to 68 years). High dose melphalan (200 mg/m2) was used for conditioning. 86 (72.8%) patients had evidence of chemo-sensitive disease prior to transplant. Response was defined as per EBMT criteria. Following ASCT 80.5% of patients responded; complete (CR) – 46(39%), very good partial response-31(26.3%), and partial response-18(15.3%). CR rate was higher for patients with chemo-sensitive disease; 44 of 86 patients (51.0%) achieved CR compared to 2 of 32 patients (6.2%) with chemo-resistant disease, p<.001. Response rate to transplant was higher for patients with serum albumin > 3.3 mg% (p = 0.03), ISS stage- I-II at diagnosis (p = 0.001) and Durie-Salmon stage IIIA, p = 0.001. At a median follow up of 83 months (range, 22 to 155 months), the median overall (OS) and event-free survival (EFS) is 72 and 29 months, respectively. Estimated OS and EFS at 60 months is 54.2% ± 0.05% (SE) and 32% ± 0.05(SE), respectively. Patients who achieved CR (median not reached yet, mean 171.91 months +/- 16.2 (SE)) and very good PR (median 84 months) following transplant had a significantly better survival compared to those with PR (median 38 months,p = 0.0001). Pre-transplant chemo-sensitive disease (OS: p = 0.006, EFS: p = 0.007), ISS stage I-II (EFS: p = 0.008) and response to transplant (OS and EFS: p = 0.0001) were important predictors of survival on multivariate analysis. Six patients (Four disease-free) were alive at >120 months follow up; all six had pre-transplant chemo-sensitive disease and had achieved CR after transplant.

Conclusion: Patients with pre-transplant chemo-sensitive disease and those who achieve complete response following transplant benefit maximum.

221

HIGH-DOSE THERAPY AND AUTOLOGOUS HEMATOPIETIC PROGENITOR CELL TRANSPLANTATION FOR RECURRENT OR REFRACTORY HODGKIN'S LYMPHOMA: ANALYSIS OF KING HUSSEIN CANCER CENTER (KHCC) RESULTS AND PROGNOSTIC VARIABLES

Abdel-Rahman, F.A., El Taani, H.A., Badheeb, A., Alfmili, M., El-Khatib, H.M., Ahmed, A., Alzabin, A., Rihani, R., Hussein, N., Sarhan, M. King Hussein Cancer Center, Amman, Jordan

Purpose: to evaluate the outcome of patients with Hodgkin's lymphoma who underwent autologus hematopoietic stem cell transplantation at the young KHCC bone marrow transplant (BMT) program.

Patients and Methods: Over the past 6 years, 63 patients with relapsed or refractory Hodgkin's lymphoma underwent high dose chemotherapy followed by autologus stem cell transplant. Among the group there were 54 adults, and 9 children. The median age was 27 years, and 61% of the patients were males.

There were 16 (25.4%) patients in complete remission (CR), 45 (71.4%) with chemotherapy responsive disease and 2 patients (3%) with stable disease. Prior to conditioning regimen, 35 patients (56%) received two chemotherapy lines only, and 28 patients (44%) received more than two lines.

All patients except three received BEAM as pre transplant conditioning.

Results: the main end points of the study are the rate of complete remission at day 100, overall survival(OS), relapse-free survival (RFS), correlation of the following variables with OS and RFS: a-disease status at the time of transplant, b-number of chemotherapy lines prior to conditioning c-age group.

The median follow up time was 16.0 months (range, 1.25-44.4months).

The day 100 non-relapse mortality was 4.8%.

The CR at day 100 was 57% (25% before transplant).The median overall survival for the whole group were 40.6 months, the median RFS was not reached but currently 63% are still relapse-free.

When we looked at the three variables in correlation with OS, and RFS in aunivarient analysis, the only statistically significant correlation was between the number of chemotherapy lines prior to conditioning and OS, with p value 0.049 in favor of patients received two lines only. In all other correlations the p value was not significant.

Conclusion: Despite its young age, our program is able to perform autologous stem cell transplantation for Hodgkin Disease at a reasonably acceptable mortality and with an outcome comparable to published data.

In our study only the number of chemotherapy lines received before conditioning had statistically significant correlation with OS.

The disease status at the time of transplant did not have statistically significant correlation with survival, this is contradicting some of the published literature, however; this could be mainly due to the small number of patients, 16 (25%): CR and 45 (71.4%): responsive disease. A complete analysis of data will be presented at the meeting.

PEDIATRIC DISORDERS

222

STEM CELL TRANSPLANTATION FOR NIJMEGEN BREAKAGE SYNDROME

Albert, M.H.[1], Gennery, A.R.[2], Greil, J.[3], Cale, C.M.[4], Kalwak, K.[5], Kondratenko, I.[6], Mlynarski, W.[7], Stachel, D.K.[8], Notheis, G.[1], Führer, M.[1], Schmid, I.[1], Belohradsky, B.H.[1] [1] Dr. von Haunersches Kinderspital, Munich, Germany; [2] Newcastle General Hospital, Newcastle, United Kingdom; [3] University Hospital, Heidelberg, Germany; [4] Great Ormond Street Hospital, London, United Kingdom; [5] Pediatric Hematology/Oncology/BMT, Wroclaw, Poland; [6] Russian Children's Clinical Hospital, Moscow, Russian Federation; [7] Medical University of Lodz, Lodz, Poland; [8] Kinderklinik der Universität, Erlangen, Germany

Nijmegen breakage syndrome (NBS) is a rare autosomal recessive disorder characterized by immunodeficiency, characteristic facial appearance, chromosomal instability, X-ray hypersensitivity, and predisposition to malignancy. About 40% of patients develop malignancy mostly of lymphoid origin before age 21. Traditionally NBS patients have not undergone stem cell transplantation (SCT) owing to concerns about chromosomal instability and increased toxicity. But in the case of resistant or relapsing malignancy SCT may be the only therapeutic option. We therefore analyzed the transplant experience in NBS patients in Europe.

A total of six genetically confirmed NBS patients were included. Median age at diagnosis was 7.6 years (range 1-18) and 14.5 years (range 2.3-20.3) at transplant. The reason to attempt SCT was resistant or secondary malignancy in four cases. The other two were transplanted because of severe immunodeficiency or suspected Fanconi anemia with immunodeficiency. All had a quantitative and functional T-cell defect and 4/6 had deficient humoral immunity before transplant. Five patients received reduced intensity regimens with in vivo T-cell depleting agents. The donors were MSD in 3 patients, one haploidentical parent and two MUD.

At a median follow up of 3.0 years (range 2.4-9.1) five of six patients are alive and well. Three patients had no relevant transplant related complications. One patient died on day +5 from sepsis. He had received a BMT from a matched sibling after a myeloablative, busulfan containing conditioning regimen. Acute GVHD grade I-II occurred in 3/5 patients, mild chronic GVHD in one. Four patients have complete donor chimerism, one has mixed chimerism, but all five exhibit restored T-cell immunity.

Although very limited, the experience in these six patients clearly suggests that SCT in NBS is feasible, can correct the immunodeficiency and effectively treat malignancy. Acute toxicity seems to be reasonable with reduced intensity conditioning regimens.However, valid concerns remain about increasing the risk for subsequent malignancy through cytotoxic agents in these patients.

223

POSTGRAFTING IMMUNE SUPPRESSION COMBINED WITH NONMYELOABLATIVE CONDITIONING FOR TRANSPLANTATION OF HLA-MATCHED RELATED OR UNRELATED HEMATOPOETIC CELL GRAFTS: PRELIMINARY RESULTS OF A PHASE II STUDY FOR TREATMENT OF PRIMARY IMMUNODEFICIENCY DISORDERS

Burroughs, L.[1,2], Storb, R.[1,2], Leisenring, W.[1], Torgerson, T.[2], Nemecek, E.[3], Frangoul, H.[4], Walters, M.[5], Scharenberg, A.[2], Rawlings, D.[2], Skoda-Smith, S.[2], Ochs, H.[2], Woolfrey, A.[1,2] [1] Fred Hutchinson Cancer Research Center, Seattle, WA; [2] University of Washington School of Medicine; [3] Oregon Health & Sciences University; [4] Vanderbilt University; [5] Children's Hospital, Oakland, CA