Stem cell transplant

474 HEMATOPOIETIC STEM CELL TRANSPLANTATION FOR LYMPHOMA: DEMOGRAPHIC DATA OF 10567 TRANSPLANTS FROM THE TRANSPLANT REGISTRY UNIFIED MANAGEMENT PROGRAM (TRUMP) OF THE JAPAN SOCIETY FOR HEMATOPOITIC CELL TRANSPLANTATION (JSHCT)

K. Izutsu[1], R. Suzuki[2], T. Fukuda[3], Y. Ueda[4], H. Taji[5], H. Sakamaki[6]
[1]Department of Hematology, Toranomon Hospital, Tokyo, Japan, [2]Department of HSCT Data Management and Biostatistics, Nagoya University, School of Medicine, Nagoya, Japan, [3]Department of Hematology and Stem Cell Transplantation, National Cancer Center Hospital, Tokyo, Japan, [4]Department of Hematology, Kyoto First Red Cross Hospital, Kyoto, Japan, [5]Department of Hematology and Cell Therapy, Aichi Cancer Center Hospital, Nagoya, Japan, [6]Hematology Division, Tokyo Metropolitan Cancer and Infectious Diseases Center, Komagome Hospital, Tokyo, Japan

Background: In Japan, patients receiving hematopoietic stem cell transplantation (HSCT) are registered to the Transplant Registry Unified Management Program (TRUMP) and follow-up data are collected annualy. TRUMP includes data originally reported to the Japan Society for Hematopoitic Cell Transplantation Japanese Society of Pediatric Hematology, Japan Marrow Donor Program, and Japan Cord Blood Bank Network.

Materials and methods: The outcomes of adult patients (15 years or older) with lymphoma who underwent HSCT in Japan from 1980 to 2009 and registered to TRUMP were retrospectively analyzed. Histologic diagnosis was based on the report from each institution.

Results: There were 10567 transplants for lymphoma, of which 7689 were autologous (Auto), 15 were syngeneic, 2863 were allogeneic (Allo), respectively. Year of transplant was 1980-1984 in 2, 1985-1989 in 18, 1991-1994 in 530, 1995-1999 in 2074, 2000-2004 in 3516, 2005-2009 in 4427, respectively. Histlogic subtype was diffuse large B-cell lymphoma (DLBCL) in 3642 (Auto 3166, Allo 474), follicular lymphoma in 1292 (780, 506), other indolent B-cell lymphomas in 429 (348, 81) mantle cell lymphoma in 327 (246, 81), T-cell lymphomas (excluding adult T-cell leukemia/lymphoma) in 1401 (881, 518), lymphoblastic lymphoma in 285 (169, 116), Hodgkin lymphoma in 776 (624, 151), respectively. At the time of transplant, 36% had relapsed/refractory disease. For Allo, donor source was bone marrow (BM) from relatives in 20%, peripheral blood from relatives in 36%, BM from unrelated donor in 31%, and cord blood in 13%. Reduced intensity conditioning was used in 34% of Allo. With a median follow-up of 38 mo for surviving patients, 3-year overall survival rate of patients with DLBCL who underwent transplant was 62% for Auto and 27% for Allo, respectively.

Conclusions: Hematopoetic stem cell transplantation has been increasingly used in practice as salvage treatment for relapsed or refractory lymphoma and as consolidation therapy for poor-risk lymphoma.

475 CALCIUM PHOSPHATE MOUTH RINSE IN PREVENTION AND TREATING ORAL MUCOSITIS FOLLOWING BEAM CHEMOTHERAPY BEFORE AUTOLOGOUS HAEMATOPOIETIC STEM CELL TRANSPLANTATION

A. Wasko-Grabowska[1], S. Oborska[1], K. Gawronski[1], J. Barzal[1], B. Mlot[1], W. Pielichowski[1], P. Rzepecki[1]
[1]BMT Unit, Military Institute of Medicine, Warsaw, Poland

Introduction/background: One of the most bothering and still not resolved problem in treating patients with high-dose chemotherapy (HDC) is oral mucositis (OM). An open-label clinical study was prepared to find out the effectiveness and safety of new preparation – supersaturated calcium phosphate solution (Caphosol®) used as a mouth wash in both preventing and treating OM after HDC- BEAM before hematopoietic stem cell transplantation (HSCT) by using a historical control group of patients.

Material and Methods: 30 patients were treated with Calcium phosphate mouth rinse (Caphosol®) (16 - non-Hodgkin lymphomas, 14- Hodgkin disease). The control group was composed of patient treated with HSCT before Calcium phosphate (Caphosol®) was available. The solution was prepared according to the manufacturer's instructions and administered 4 times daily, starting from the day before the beginning of chemotherapy till the end of hospitalization. The severity of oral mucositis was evaluated every day according to the WHO 5-grade scale. Number of days with painkillers (MF 4 times s.c.) and with total parenteral nutrition were compared. Patients received BEAM chemotherapy [BCNU 300 mg/m^2 day -6; etoposide (800 mg/m^2) plus Ara-C 1000 mg/m^2 both from day -5 to -2; melphalan (140 mg/m^2) day -1 before grafting] as conditioning regimen. The patients' groups were comparable for statistical analysis in terms of chemotherapy regimens received, number of patients, their age, sex and underlying diseases.

Results: In the group treated with calcium phosphate 63% patient were free of any kind of OM symptoms, in the control group OM was observed in all cases. The median duration of OM was2 days in Caphosol group vs. 8.5 in control, only one patient received TPN and 3(10 %)patients needed opioids. In control group more than a half of patient received TPN and all of them received opioids. No side effects were observed.

	OM G0	OM G1	OM G2	OM G3	OM G4
Calcium phosphate mouth rinse	63%	20%	10%	3,30%	3,30%
control	0%	0%	47%	22%	31%

Conclusions: Calcium phosphate mouth rinse (Caphosol®) decreases incidence, severity and duration of oral mucositis following BEAM chemotherapy before autologous haematopoietic stem cell transplantation.

476 ALEMTUZUMAB DOES NOT AFFECT HEMATOPOIETIC RECOVERY AFTER AUTOLOGOUS STEM CELL TRANSPLANTATION IN T-CELL LYMPHOMA: DATA FROM THE ACT-1 TRIAL

G. F. Lauritzsen[1], M. Gomes Da Silva[2], S. Leppa[3], A. Pezzutto[4], T. Relander[5], E. Weidmann[6], M. Van Gelder[7], J. Doorduijn[8], P. Hansen[9], B. Altmann[10], H. Toldbod[11], F. D'Amore[11]
[1]Oncol, Oslo Univ Hosp, Oslo, Norway, [2]Hematol, Portuguese Inst of Oncol, Lisbon, Portugal, [3]Oncol, Helsinki Univ Central Hosp, Helsinki, Finland, [4]Hematol and Oncol, Charite Med School, Berlin, Germany, [5]Oncol, Lund Univ Hosp, Lund, Sweden, [6]Hematol and Oncol, Krankenhaus Nordwest, Frankfurt, Germany, [7]Internal Med/Hematol, Academic Hosp, Maastricht, Netherlands, [8]Hematol, Erasmus Medical Center, Rotterdam, Netherlands, [9]Hematol, Herlev Hosp, Herlev, Denmark, [10]IMISE, Leipzig, Germany, [11]Hematol, Aarhus Univ Hosp, Aarhus, Denmark

We reported on the impact of alemtuzumab in combination with CHOP (A-CHOP-14) on autologous stem cell harvest in Blood (2010) 116: 3565. We now analyze the time from hematopoietic stem cell reinfusion to leucocyte, neutrophil and platelet recovery (total leucocyte count >1x10^9/l, absolute neutrophil count >0.5x10^9/l, platelet count >20 and >50 x10^9/l) among evaluable patients included in an ongoing randomised international clinical trial (ACT-1) of primary systemic peripheral T-cell lymphoma (PTCL). ACT-1 trial tests the addition of alemtuzumab to CHOP (arm B) followed by high dose treatment with autologous stem cell transplant (HDT-ASCT).

So far, ACT-1 has enrolled 54 patients, of which 21 (13 in arm A: 6 x CHOP-14 + HDT-ASCT and 8 in arm B: 4 x A-CHOP-14 + 2 x CHOP-14 + HDT-ASCT) had evaluable transplantation parameters. There was no significant difference in age or number of reinfused CD34$^+$ stem cells between arm A and B. The comparison of hematopoietic recovery parameters is summarized in the table:

Parameter median (lower quartile; upper quartile)	arm A patients	arm B patients +alemtuzumab	p-value
Days to ANC >0.5x10^9/l	11(11;14) n=11	12(10;13) n=8	.769
Days to leuko >1x10^9/l	12(10;13) n=11	12(11;13) n=8	.801
Days to platelets >20x10^9/l	13(9;17) n=10	11(10;13) n=8	.446
Days to platelets >50x10^9/l	19(13;21) n=10	14(13;19) n=7	.589
No. infused CD34$^+$x10^{6}cells/kg	5.3(3.4;7.1) n=13	3.3(2.3;4.6) n=8	.089
Bone marrow involvement at diagnosis yes (%)	4/13(30.8) n=13	1/8(12.5) n=8	.606
Age median (range)	53(21-59) n=13	54(31-64) n=8	.771

No significant difference in platelet and neutrophil recovery time was found between the two arms. Hematopoietic recovery was in line with expected standards (9-17 days from stem cell reinfusion).

Hematopoietic recovery after ASCT in systemic PTCL patients treated with CHOP-alemtuzumab (ACT-1 trial), does not differ from patients given CHOP alone.

477 MOBILIZING ACTIVITY AND TOXICITY OF A VINORELBINE, IFOSFAMIDE AND CYTARABINE (VIHA) REGIMEN IN RESISTANT/ RELAPSED NON HODGKIN'S LYMPHOMA (NHL)

M. Magagnoli[1], M. Balzarotti[1], A. Anastasia[1], R. Mazza[1], L. Giordano[1], S. Gandolfi[1], L. Castagna[1], A. Santoro[1]
[1]*Department of Oncology and Hematology, Humanitas Cancer Center, Rozzano, Italy*

Background: The identification of active regimens sharing clinical and mobilizing activity with low toxicity are warranted for relapsed/refractory NHL patients (pts), as induction therapy before peripheral blood stem cell transplantation (PBSCT). Vinorelbine (VNR), ifosfamide (IFX), and cytarabine (ARA-C) are of proved efficacy in this setting.

Material and Methods: From 1999 to 2008, 115 pts underwent the VIHA regimen: VNR 25 mg/mq day 3, IFX 2500 mg/mq days 1-3, and ARA-C 2 gm/mq bid days 2-3. Pts older than 60 years, were given the same regimen at 75% of doses. Cycles were repeated every 21 days for 4 courses, with G-CSF support from day 7 to day 12 or up to the apheresis. Mobilization was performed from the 3rd cycle, in patients with at least partial remission (PR) achieved after cycle 2.

Results: Main clinical characteristics: median age 47 (range 28-73) with 36 pts older 60 years, aggressive histology 73, primary refractory disease 44, stage III or IV 42, bone marrow involvement 20. Seventy-seven pts had received at least two lines of chemotherapy before VIHA. Sixty-seven patients (59%) obtained an objective response (OR) with 48 (42%) of these achieving complete remission (CR) according to CT-scan criteria. With regard to stem cell mobilization, 93 pts underwent peripheral blood CD34+ monitoring, apheresis was performed when CD34+ cell count exceeded 10 cells/l. Thirteen pts failed mobilization. In 80 mobilized pts, median number of CD34+ cells collected was 7.1 x 10^6/Kg (range 1.5-45) after a median of 2 (1-3) apheretic procedures independently by the full or reduced VIHA doses. Among more than 240 VIHA cycles analyzed for haematological toxicity 86% of full dose VIHA required platelet transfusions and 50% RBC transfusions, as compared to 46% (p<.0001), and 34% (p0.03), of reduced dose VIHA, respectively. Febrile neutropenia complicated 27% of all cycles and there were 19 documented infections. Thirty-five per cent required hospitalization for documented infection; febrile neutropenia was recorded in 35% of full-dose VIHA and in 16% of reduced VIHA cycles (p.01). There was one death-related therapy.

Conclusions: VIHA regimen shows clinical and mobilizing activity. The high incidence of response associated to mobilizing activity justify the use of such combination as pre-transplant induction chemotherapy in relapsing/refractory NHL whenever PBSCT is previewed in the treatment planning. However, it should be reserved to highly selected cases with particularly poor characteristics at relapse, in order to justify its toxicity profile. Reduced dose of ARA-C could allow a better management of the regimen, expecially concerning thrombocytopenia.

478 IMPACT OF RITUXIMAB ON PERIPHERAL BLOOD STEM CELL MOBILIZATION FOLLOWING ACVBP REGIMEN IN POOR-RISK PATIENTS WITH DIFFUSE LARGE B-CELL LYMPHOMA: RESULTS FROM A LARGE COHORT OF PATIENTS

F. Lefrere[1], D. Bastit-Barrau[2], S. Mathieu[3], A. Bohbot[3], H. Tilly[4], G. Salles[5], L. Fornecker[6], N. Mounier[7], O. Fitoussi[8], C. Haioun[3]
[1]*Biotherapy, Hematology, Paris, France,* [2]*Hemapheresis, Etablissement Français du Sang, Rouen, France,* [3]*Hemapherseis, Etablissement Français du Sang, Nancy, France,* [4]*Hematology, Centre Henri Becquerel, Rouen, France,* [5]*Hematology, CHU, Lyon, France,* [6]*Hematology, Hôpital Saint-Louis, Paris, France,* [7]*Hematology, CHU, Nice, France,* [8]*Hematology, Polyclinique, Bordeaux, France*

Background: The ACVBP regimen has been proposed as an efficient dose intensified induction regimen for young poor-risk (IPI 2-3) patients with diffuse large B-cell lymphoma (DLBCL) prior to consolidative autologous peripheral blood stem cell (PBSC) transplantation as a front-line treatment. Adjunction of the monoclonal anti-CD20 antibody rituximab (R-ACVBP) was recently found to be superior to ACVBP alone. The present study assessed the impact of rituximab on PBSC mobilization in two similar consecutive groups of 18- to 60-years old patients with newly diagnosed poor-risk DLBCL and treated with ACVBP in two prospective, controlled clinical trials.

Design and methods: The first trial (LNH 98B-3 performed between 1997 and 2003) involved 137 patients treated with ACVBP alone. In the second trial (LNH 03-3B performed between 2004 and 2007), 91 patients received an R-ACVBP regimen. Stem cell mobilization was performed for all patients in both trials following the third or the fourth course of (R)-ACVBP: responders patients then received high-dose therapy and underwent PBSC transplantation.

Results: The median peak numbers of peripheral blood CD34+ cells counts recorded before the first apheresis procedure in the ACVBP and R-ACVBP groups were 69 x 10^6/l and 63 x 10^6/l, respectively (p=0.55). The median numbers of CD34+ cells collected were 7.1 x 10^6 and 6.0 x 10^6 CD34 cells/kg for the ACVBP and R-ACVBP groups, respectively (p=0.13), whereas the median number of apheresis procedures required for gathering the minimum amount of CD34+ cells (2 x 10^6/ kg) was the same in the two groups. The proportion of PBSC collection failures was also the same in the two groups.

Conclusion: When compared with ACVBP alone, adjunction of rituximab does not impair PBSC mobilization.

480 ALLOGENEIC STEM CELL TRANSPLANTATION IN MALIGNANT LYMPHOMA; THE NORWEGIAN EXPERIENCE

Y. Fløisand[1], L. Brinch[1], G. Kvalheim[2], H. Holte[3], D. A. Fowler[4], A. Kolstad[3]
[1]*Hematology, Oslo University Hospital, Rikshospitalet, Oslo, Norway,* [2]*Cellular Therapy, Oslo University Hospital, Radiumhospitalet, Oslo, Norway,* [3]*Oncology, Oslo University Hospital, Radiumhospitalet, Oslo, Norway,* [4]*Immunology, NIH, Bethesda, MD, United States*

Introduction: Allogeneic stem cell transplantation (ASCT) with reduced intensity conditioning (RIC) is increasingly being used as salvage therapy in relapsed lymphoma patients where conventional chemotherapy has minimal chances of producing long-term failure-free survival. We here report our experience with this treatment for 36 patients with relapsed non-Hodgkin's and Hodgkin's lymphoma with a median follow-up of 18 months.

Methods: Patients with relapsed incurable malignant lymphoma, either with an HLA-matched sibling donor or matched unrelated donor (MUD) received induction treatment with 1 – 3 courses of dose-adjusted EPOCH-Fludarabin (including rituximab when CD20 positive). The aims were to reduce CD4 counts below 0.100 prior to transplant and to achieve a best possible remission. The conditioning regimen consisted of Fludarabine 30 mg/m2 and Cyclophosphamide 1200 mg/m2 on days -6 to -3. GvHD prophylaxis was given as Cyclosporin A and a short course of Sirolimus from day -2 to +1.

Results: The median age was 49 years (19 – 67). Follicular lymphoma was the most common subgroup (8 pts), followed by Hodgkin's lymphoma (7) and DLBCL (7), T-cell lymphoma (5), transformed follicular lymphoma (5), mantle cell lymphoma (2) and Mycosis Fungoides (2). A matched family donor was used in 22 patients (61%) and a MUD in 14 patients. All patients received mobilized peripheral blood stem cells. Acute graft vs host disease (GvHD) grade II-IV developed in 14 patients (39%). Chronic GvHD developed in 21 patients (58%), eight patients (22%) experiencing extensive chronic GvHD.

In December 2010 with a median follow-up of 18 months (range) 25 patients (69 %) were alive, 23 without evidence of disease (64%). Transplant related mortality due to GvHD, infection or toxicity was seen in eight patients (22%). There were three deaths due to relapse. In the family donor group there were four relapses, whereas there were two in the MUD group. Thirteen patients (59 %) were still on immunosuppressive treatment at last follow-up, 14 with active chronic GvHD, one with bronchiolitis obliterans. Significantly, 11 patients (36 %) have hypogammaglobulinemia requiring substitution. Seven patients developed CMV reactivation; three patients had verified fungal infections (1 Aspergillus, 2 Mucor)

Conclusion: RIC-ASCT is a potentially curative treatment modality for patients with relapsed malignant lymphoma. The treatment is still associated with high complication rates and TRM.

480 REDUCED INTENSITY CONDITIONING ALLOGENEIC STEM CELL TRANSPLANT IN MATURE LYMPHOID MALIGNANCIES: A CENTRE EXPERIENCE

M. Cabrero[1], A. Martin[1], J. Labrador[1], E. Perez-Lopez[1], L. Lopez-Corral[1], L. Vazquez[1], C. Cañizo[1], F. Sanchez-Guijo[1], T. Villaescusa[1], I. Cordoba[1], N. Gutierrez[1], M. Gonzalez[1], J. San Miguel[1], D. Caballero[1]
[1]*Hematology Department, Hospital Universitario Salamanca, Salamanca, Spain*

In patients with mature lymphoid malignancies, reduced intensity conditioning (RIC) allogeneic stem cell transplant (HSCT) is a potentially curative alternative. A graft versus lymphoma effect along with the decrease of non relapse mortality (NRM) previously reported with myeloablative conditioning, support the role of RIC transplant in these patients.

We present data from 87 patients with lymphoproliferative syndromes consecutively transplanted in our centre; most of them were included in different prospective Spanish trials since 1999. Median age was 47.8 years (range 17-67). Diagnosis were: Diffuse Large B Cell Lymphoma (9 patients), Mantle Cell Lymphoma (5), Indolent Lymphoma (21), T Cell Lymphoma (11), Hodking Lymphoma (17) and Chronic Lymphocytic Leukemia (23). Before HSCT, 51% of patients received more than 4 therapy lines, and 36.8% had a previous autologous transplant. Before transplant, 41% had a complete remission (CR), 40% partial response (PR), and 18% were transplanted with refractory disease (RD). Donor was unrelated in 28%, and conditioning regimen consisted on Fludarabine 150 mg/m^2 iv and Melphalan 140mg/m^2 iv in 89.6%.

Results: All patients engrafted, and median of days to reach more than 500x10^9 granulocytes and more than 20x10^9 platelets were +17 (10 – 44) and +13 (0-136) respectively. With a median follow up of 67 months (1-127), 48 patients (55.2%) are alive, 38 of them (79.2%) free of progression. NRM is 9.3% at day +100, 20.8% at 1 year and 27.1% at 4 years. Overall survival (OS) is 57.2%, and progression free

survival (PFS) is 47.5% at 4 years. Considering different diagnosis, OS and PFS are 48.9% and 41.3% respectively for aggressive lymphoma (DLBCL and PTCL), 55.6% and 54.2% for indolent lymphoma, 68% and 64.5% for CLL and 53% and 32.4% for HL.

The univariate analysis shows that chronic GVHD and status at transplant (CR>PR>RD) are associated with better OS and PFS, whereas the presence of acute GVHD is associated with reduced OS (All $p<0.05$). Using Cox regression, the development of chronic GVHD influences on OS (HR, 0.39; 95% CI, 0.16-0.94; $p<0.01$) and PFS (HR 0.23; 95% CI, 0.11-0.54; $p<0.05$). The presence of grade 3-4 acute GVHD is also associate with reduced OS in multivariate analysis (HR 19.38, 95% CI, 4.46-88.16; $p<0.01$).

Conclusion: These single centre positive results confirm the potential role of RIC allogeneic transplant in lymphoid malignancies, achieving better results in patients with CR at transplant who have chronic GVHD but not develop acute GVHD.

481 LONG-TERM SURVIVAL AFTER REDUCED–INTENSITY ALLOGENEIC TRANSPLANTATION FOR ADVANCED LYMPHOPROLIFERATIVE DISORDERS

D. Bron[1], P. Zachee[2], K. Theunissen[3], A. Ferrant[4], P. Lewalle[1], C. Doyen[5], L. Noens[6], W. Schroyens[7], D. Selleslag[8], H. Demuynck[9], R. Schots[10], S. Michiels[1], A. De Meûter[1], J. Maertens, on behalf of the Belgian Hematological Society[3]

[1]Hematology, Institut Jules Bordet, Brussels, Belgium, [2]Hematology, Hematologisch Centrum Ziekenhuisnetwerk, Antwerpen, Belgium, [3]Hematology, UZ Gasthuisberg, Leuven, Belgium, [4]Hematology, Cliniques St Luc, Brussels , Belgium, [5]Hematology, Clinique Mont Godinne, Yvoir, Belgium, [6]Hematology, UZ Gent, Gent, Belgium, [7]Hematology, UZ Antwerpen, Antwerpen, Belgium, [8]Hematology, AZ St Jan, Brugge, Belgium, [9]Hematology, Heilig Hartziekenhuis, Roeselaere, Belgium, [10]Hematology, AZ-VUB, Brussels, Belgium

Introduction: The role of Reduced Intensity Conditioning (RIC) allogeneic transplantation in lymphomas and related disorders is unclear and little data are published with a long term follow-up.

Patients and methods: 75 patients (pts), with lymphoproliferative disorders (44 lymphomas, 21 CLL, 10 Hodgkin's Lymphomas) were transplanted with peripheral hematopoietic stem cells from HLA identical sibling donors after RIC (ATG:0-40mg/kg, CPA 3x1g/m2, Flu 4 x30mg/m2). 48 pts had prior autologous transplantation. 54/75 pts were considered « poor prognostic » pts (CR2+, SD, PR, PD). Median age was 55 (13-75) years. 30% were >60 yo. GVHD prophylaxis consisted of Cyclosporin A and Mycophenolate. The median FU of the population is 60 months. All these patients were treated according to a national protocol in which the secondary objectives were overall and event-free survival.

Results: 86 % of the pts engrafted after 3 months (T chimerism > 95%). With a 5 yrs median follow-up, 23% of the pts developed aGVHD 2+, 28% and 7% of the pts developed limited or extended cGVHD. Non Relapse Mortality (nRM) was 25% but up to 40% in pts above 60yrs.Relapse rate was 38%. Overall survival is 60% /5yrs with no significant differences between good and poor prognostic pts. Event-free-survival is 43%/ 5yrs. Analysis of histological subgroups shows 60% EFS for NHL, 53% for CLL and 15% for HL among the pts currently in continuous CR. Histologies are: Follicular Lymphomas (8/11), CLL (11/21), Mantle Cell Lymphomas (4/9), TNHL (2/2).

Conclusions: RIC transplantation has a role in the treatment of Lympho-proliferative diseases even in advanced heavily pretreated pts. Follicular lymphomas, T cell lymphomas and CLL appear to be very sensitive to RIC transplantation.

482 TRIPLE DRUGS COMBINATION IN PREVENTION OF NAUSEA AND VOMITING FOLLOWING BEAM CHEMOTHERAPY BEFORE AUTOLOGOUS HAEMATOPOIETIC STEM CELL TRANSPLANTATION

W. Pielichowski[1], K. Gawronski[1], B. Mlot[1], S. Oborska[1], A. Wasko-Grabowska[1], P. Rzepecki[1]

[1]BMT Unit, Military Institute of Medicine, Warsaw, Poland

Objective: A clinical study of triple drugs combination was carried out to evaluate its efficacy in preventing both acute and delayed emesis after high-dose chemotherapy (HDC)- BEAM before hematopoietic stem cell transplantation (HSCT) by using a historical control groups of patients treated with dexamethasone (dex) and ondansetron or palonosetron.

Methods: 96 patients were evaluated (54- non-Hodgkin lymphomas, 42- Hodgkin disease). They received BEAM as conditioning regimen. Evaluated patients received: aprepitant p.os 1 hour before HDC (day 1- 125mg, days 2 though 3- 80mg)+ 0,25mg palonosetron i.v. 30 min before chemotherapy on the first day of conditioning regimen and dex 20 mg i.v. 15 min before HDC (day 1) and 12mg daily in the remaining days of conditioning regimen. Historical control groups of patients received ondansetron 32mg i.v. daily through HDC or palonosetron (both + dex as above described). The patients' groups were comparable for statistical analysis in terms of chemotherapy regimens received, number of patients, their age, sex, weight and underlying diseases. The observation period started with the initiation of chemotherapy (0 h) and continued for 24 h after completion of the chemotherapy for acute phase, and during five days after finishing chemotherapy for delayed phase. The severity of nausea was evaluated according to the following 4-grade scale: none (no nausea); mild (slight nausea but no disruption to daily activities); moderate (nausea+ some disruption to daily activities); and severe (extreme nausea+ severe disruption to daily activities). The emetic response rate was evaluated using the following criteria: complete (no emetic episode); major (1-2 episodes); minor (3-5 episodes); and failure (>5 episodes). The response rate of the study drugs was evaluated by the following 4-grade scale based on the condition of nausea and vomiting: highly, moderately or slightly effective and not effective.

Results:

Treatment	highly effective early + late phases (%)	highly effective early phase (%)	highly effective late phase (%)	highly + moderately effective early phase (%)	highly + moderately effective late phase (%)
Triple combination	82	94	85	97	97
Palonosetron + dexamethasone	70	70	85	70	90
Ondasetron + dexamethasone	35	35	50	40	60

Conclusions: Triple drugs combination was more effective than ondansetron or palonosetron (+ dex) treatments in preventing acute (especially) and delayed nausea and vomiting following BEAM before HSCT.