such as HSV, VZV, ADV, EBV, CMV, HHV-6 and HIV was excluded by PCR. The blood lymphocyte subset showed lymphopenia, however with normal CD4/CD8 ratio. Finally CNS biopsy revealed T-cells close to blood vessels, a pattern typical for cerebral GvHD. Immunosuppressive treatment was started with high dose steroids in combination with mycophenolatmofetil (MMF). She recovered rapidly and became completely awake within one week. After 9 months of immunosuppression the patient is competent in activities of daily living.
Conclusions: GVHD of the central nervous system (CNS) is a rare disease after allogeneic stem cell transplantation. The absence of lymphocytes in the cerebrospinal fluid and normal CD4/CD8 ratio in peripheral blood does not exclude GvHD of the CNS. CNS biopsy should be considered to confirm the diagnosis. This case demonstrates that CNS involvement can be the only manifestation of chronic GvHD. Immunosuppressive therapy may provide an impressive benefit in these patients.

9230 POSTER

Can Allogeneic Peripheral Blood Stem Cells Be Safely Cryopreserved for Use in Patients Undergoing Transplant

M. Webber[1], M. Patel[1]. [1]*University of Birmingham, Bone Marrow Transplant Centre, Birmingham, United Kingdom*

Background: Peripheral blood cells (PBC) are now widely used over bone marrow transplantation in patients with haematological malignancy. To date, there has been no analysis as to whether cryopreservation is associated with delayed stem cell engraftment. We therefore decided to perform a retrospective study to observe the outcomes of patients post PBC transplantation.
Materials and Methods: 154 patients who underwent PBC transplantation over a 5 year period at the Queen Elizabeth Hospital were divided according to the type of stem cell transplantation; fresh allogeneic or cryopreserved allogeneic. Data was sourced from an automated Patient Information Communication System (PICS). The main outcome measure was defined as the time taken for primary stem cell engraftment (neutrophil count recovery to 1×10^9/l and platelet count recovery to 30×10^9/l). Any differences were compared whilst adjusting for age, diagnosis, transplant intensity and stem cell number.
Results: The mean time taken for neutrophil count to reach 1×10^9/l was greater in the cryopreserved group (14.5 days, 95% CI 11.9–12.9) when compared to the fresh group (12.4 days, 95% CI 13.6–15.4) ($p < 0.05$ for difference). The mean time taken for platelet count to reach 30×10^9/l was also greater in the cryopreserved group (19.36, 95% CI 16.2–22.6) when compared to the fresh group (11.72, 95% CI 10.9–12.5) ($p < 0.05$ for difference). Similar results were found when adjusting for age, diagnosis, transplant intensity and stem cell number.
Conclusions: For the first time, we have shown that cryopreservation of haemapoeitic stem cells does delay both platelet and neutrophil engraftment. We recommend that a cautious approach should be considered when choosing cryopreservation over fresh stem cell transplants. In patients requiring such methods there may be a delay in engraftment; increasing hospital associated morbidity and the necessity for greater supportive care.

9231 POSTER

BEACOPP-14 Vs. BEACOPP-esc in Patients With Hodgkin's Disease From Poor-prognosis Group − Updated Results of Prospective Randomized Multicenter Study

I. Titorenko[1], I. Kriachok[1], K. Filonenko[1], O. Novosad[1], O. Alexik[1], T. Kadnikova[1], A. Martynchik[1], T. Kadnikova[1], E. Kuscshevyy[1], Y. Pastushenko[1]. [1]*National Cancer Institute, Oncohematology, Kiev, Ukraine*

Background: The efficacy and toxicity of the treatment with beacopp-14 and beacopp-esc regimens in patients with Hodgkin's disease (HD) from high risk group are compared in prospective randomized study.
Materials and Methods: Since September 2008 81 patients in 6 Ukrainian centers from 18 to 65 years old (median 28 years), 38 male and 43 female with stage IIB with $\geqslant$1 unfavorable factors and stage III-IV were randomized to receive the treatment with beacopp-14 (36 pts, 5.88 cycles per patient) and beacopp-esc (45 pts, 5.61 cycles per patient). The treatment efficacy in both groups was evaluated after 4, 6 and 8 cycles by Cheson criteria (1999, 2007). Toxicity rate was evaluated with NCI-CTC. After completion of chemotherapy patients with initial sites >5 cm, residual lymph nodes >2 cm and PET-positive sites received radiotherapy (30−36 Gy). The similar group of patients, who received the therapy with ABVD, was selected for the historical control.
Results: The therapy efficacy in both groups was higher than in the group of ABVD treatment; the difference in the efficacy in the groups of beacopp-14 and beacopp-esc was insignificant (Table). 2 patients after the treatment with beacopp-esc have early relapse (after 3 months and 1 year). There were no relapses detected in the group of beacopp-14; $p > 0.05$. All patients are alive; maximal observation period is 26 mnths. In the group of historical control overall response rate (ORR) after the completion of the treatment was 80.39%; that is significantly lower than in the both groups treated with beacopp-esc or beacopp-14. The most frequent toxicity type in both groups was hematological toxicity (Table) of different grades. In 7.5% the beacopp-14 cycles were not completed due to neutropenia of 4 grade. The most frequent nonhematologic complications were nausea and vomiting.
Conclusion: Both comparative regimens show almost equal treatment efficacy and toxicity rate in patients with HD of the poor prognosis group (100% ORR after 6−8 cycles). The efficacy of ABVD treatment in the similar group of patients with HD was significantly lower. However, the results are preliminary and should be confirmed in larger number of patients and with a longer follow-up.

Table. Efficacy and toxicity rate

	BEACOPP-14, %	BEACOPP-esc, %	p-value
ORR, 6 cycles	100	97.4	>0.05
ORR, 8 cycles	100	100	>0.05
CRR, 8 cycles	82.8	86.8	>0.05
CRR, 8 cycles	88.9	87.5	>0.05
Relapses	2 pts	0 pts	>0.05
Hematological toxicity	72.8	67.6	>0.05
Anemia	25	12.5	<**0.05**
Neutropenia	35.5	37.3	>0.05
Febrile neutropenia	8.5	6.7	>0.05
Nausea and vomiting	31.3	44.6	>0.05
Mucositis	11.8	6.1	>0.05

9232 POSTER

B Cell-activating Factor of TNF Family (BAFF) Signaling Pathway is Associated With Helicobacter Pylori-independent Growth of Gastric MALT Lymphoma Without T(11;18)(q21;q21)

S. Kuo[1], L. Chen[2], K. Yeh[1], C. Lin[3], M. Wu[4], P. Hsu[4], Y. Tzeng[1], H. Jeng[1], A. Cheng[1]. [1]*National Taiwan University Hospital, Department of Oncology, Taipei,* [2]*National Health Research Institutes, National Institute of Cancer Research, Tainan,* [3]*National Taiwan University Hospital, Department of Pathology, Taipei,* [4]*National Taiwan University Hospital, Department of Internal Medicine, Taipei, Taiwan*

Background: We have recently discovered that nuclear expression of BCL10 or NF-κB is closely associated with *Helicobacter pylori* (HP)-independent status of low-grade gastric mucosa-associated lymphoid tissue (MALT) lymphoma with or without t(11;18)(q21;q21) (Blood. 2005;106:1037–1041). In this study, we examined the role of B cell-activating factor belonging to the TNF family (BAFF) in mediating BCL10 nuclear translocation and in activating NF-κB, and HP-independence of gastric MALT lymphoma without t(11;18)(q21;q21).
Materials and Methods: Sixty-six patients who underwent successful HP eradication for localized low-grade gastric MALT lymphomas were included. Status of t(11;18)(q21;q21) was determined by reverse transcriptase polymerase chain reaction for API2-MALT1 transcript, while expression of BCL10, NF-κB, and BAFF was detected by immunohistochemistry. The primary MALT lymphoma cell was obtained from fresh marrow aspiration-derived lymphoma of a t(11;18)(q21;q21)- and t(1;14)(p22;q32)-negative gastric MALT lymphoma patients who had failed antibiotics treatment and standard chemotherapy. Phospho-Akt (Ser473 and Thr308), BCL3, BCL10, NF-κB (p65), NF-κB (p52), cyclin D3, c-Myc, and BAFF protein expression were assessed by immunoblotting. Transactivity of NF-κB was measured by electromobility shift assay,
Results: Fifty-two (78.8%) patients were negative for t(11;18)(q21;q21); among them, 34 (65.4%) were HP-dependent and 18 (34.6%) were HP-independent. Furthermore, in t(11;18)(q21;q21)-negative patients, BAFF expression was significantly higher in HP-independent than in HP-dependent tumours (13 of 18 [72.2%] vs 10 of 34 [29.4%]; $P = .003$). BAFF overexpression was associated with nuclear expression of BCL3 ($P = .014$), BCL10 ($P = 0.006$), and NF-κB ($P = 0.008$). In MALT lymphoma cell line, BAFF activated NF-κB and AKT; the activated NF-κB up-regulated BCL10, c-Myc, and cyclin D3, and the activated AKT caused formation of BCL10/BCL3 complexes that translocated to the nucleus. Inhibition of AKT by LY294002 (a PI3K inhibitor) blocked BCL10 and BCL3 nuclear translocation, NF-κB transactivity, and BAFF expression. The BCL3 nuclear translocation and NF-κB activation were inhibited by silencing BCL10 (BCL10 SiRNA). In addition, knockdown of BCL3 expression by SiRNA influenced the nuclear translocation of BCL10.