1373

MOBILIZATION OF PERIPHERAL BLOOD PROGENITORS IN MULTIPLE MYELOMA. HOW TO DEAL WITH HARD TO MOBILIZE MYELOMA PATIENTS-SIX YEARS CENTER EXPERIENCE

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Peripheral blood progenitor cells (PBPCs) mobilized with high-dose chemotherapy and hematopoietic growth factors are still used to support myeloablative therapy of multiple myeloma during the autologous setting. Variables having an impact on the ability to collect PBPC include age, month's prior previous chemotherapy, mobilization regimen and platelet count at the time of mobilization. Myeloma patients with low mobilizing capacity indicate the need of evaluating alternative mobilizing regimens. We analyzed 25 patients with MM that underwent PBPC mobilization at Department of hematology, University Clinical Center Skopje. Pts received Cyclophosphamide (3gr/m^2) followed by daily G-CSF (10 mcg/kg). In 15 pts we experienced a significant WBC nadir on median day +6, and began pheresis in recovered WBC up to 5.0×10^9/L on day +8 (median). Good mobilizers reached at least 2×10^6/kg CD34$^+$ cells with median 3 (ranges 1-6) apheresis procedures. In 9 MM patients we registered low mobilizing capacity. Remobilizing procedure was preformed with single G-CSF in a dose of 20 mcg/kg in a 5 days regimen. All remobilized patients reached sufficient CD34+/kg count with median 2 (ranges 1-4) aphaeresis procedures. In statistical data in both groups of good and hard to mobilize MM pts we followed several variables concerning the platelet count on day 1 of aphaeresis which correlated with the ability to collect over 5×10^6 CD34+cells/kg (p<0,001), age of patients < 60 yrs and >60yrs (p<0,001) and previously received chemotherapy cycles of 5 pts (27%) who started aphaeresis on median day +14 (p<0,001) in the Cy/G-CSF group. We can conclude that the 5 day regimen of single G-CSF in increased daily dose showed effective with efficient yields results for median 2 day leukopheresis procedure, well tolerated with possibility for mobilization in outpatient basis. This approach, if confirmed on larger series of myeloma patients could open new opportunities in stem cell mobilization for poor or non-mobilizers.

1374

INFLAMMATION IN HYPERTENSIVE PATIENTS WITH METABOLIC SYNDROME

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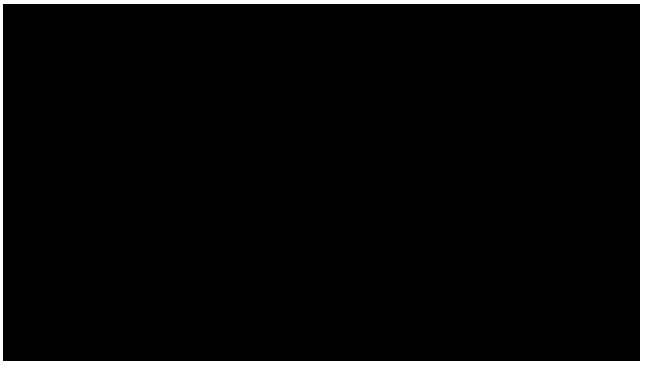
Background. Inflammation has been implicated in metabolic syndrome pathogenesis as it plays a key role in the development of atherosclerosis. *Aim of the study*. To evaluate inflammation index in hypertensive patients with metabolic syndrome. *Materials and methods*. Three groups of patients participated in the study. Group A: 175 (58 men- 117 women) non diabetic patients with metabolic syndrome. All patients were hypertensive under no medications. Group B: 103 hypertensive patients with no metabolic syndrome. Group C: 98 healthy volunteers. The values of CRP and omocysteine were measured in groups A, B and C. *Conclusion*. All inflammatory parameters are elevated in hypertensive patients with or without metabolic syndrome. This fact is correlated with the high prevalence of atherosclerosis in these patients.

Table 1.



1375

A METHOD FOR EVI-1 QUANTIFICATION BY RT-PCR IN HEMATOLOGICAL MALIGNANCIES

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A method for evi-1 quantification by rt-pcr in hematological malignancies

Introduction. Previous studies have demonstrated that EVI-1 overexpression is involved in the development of several leukemias. In these leukemias a transcriptional activation has been observed which does not allow them from reaching terminal differentiation. EVI-1 overexpression has a high prevalence on certain types of leukemias such as: Acute Myeloblastic Leukemia (AML), Myelodisplastic Syndromes (MDS), blastic crisis (BC) in chronic Myeloid Leukemia (CML), and according to other authors it appears with low prevalence on Acute Lymphoblastic Leukemias (ALL). *Aim*. The optimization of a procedure by Quantitative RT-PCR (QRT-PCR) for the detection of EVI-1 overexpression as well as to determine different expression levels depending on the type of hematological malignancy.

Table 1.

Cut-off EVI-1	SMPC Phi- n=14	LMC n= 29	LLA n=15	LMA n=31
>0.0074	1 (7.14%)	15 (51.74%)	4 (26,66%)	9 (29%)

Figure 1.

Material and methods. Samples: 120 samples were studied, 17 belonging to healthy donors, and 103 to patients with varied diseases (14 MDS, 31 AML, 14 MPCD Ph-, 15 ALL and 29 CML). Relative Quantification: EVI-1 expression was analyzed in bone marrow and/or peripheral blood samples by QRT-PCR, adapting the technique developed by M. Russell *et al.* (Blood 1994) to the LightCycler 480 system, using as a fluorescent tracer SybrGreen I. In order to confirm the specificity of the obtained product, a melting curve was performed. GADPH was used as a reference gene. Results obtained through quantification are expressed as the ratio between the patients' samples and the reference gene. This result was then compared to the ratio between EVI-1 concentration in cell line k562, which was used as a calibrator, and which was amplified in each PCR. All samples were analyzed twice. All samples with a value 2 standard deviations above the healthy population's mean were considered statistically positive. *Results*. We concluded that the Cut-off considered as positive is a EVI-1 value >0.0074. 2- Table 1 Figure 1 *Conclusions*. 1. RT-PCR is a quick, easy and sensible method to study EVI-1 expression. 2. Results have allowed us to establish a cut-off above which patients can be considered positive, not only in AML and MDS, but also on other hematological malignancies. 3.The highest EVI-1 expression levels belonged to AML patients