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732.ALLOGENEIC TRANSPLANTATION: DISEASE RESPONSE AND COMPARATIVE TREATMENT STUDIES

Cytarabine Plus Etoposideis+Peg-Rhg-CSF Is More Effective Than Cyclophosphamide + G-CSF As a Stem Cell Mobilization Regimen in Poorly Mobilized MM and Lymphoma

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There are several methods for hematopoietic stem cell (HSC) mobilization in lymphoma and multiple myeloma (MM),of which Cyclophosphamide(Cy) plus granulocyte-colony stimulating factor(G-CSF)is a commonly used HSC mobilization regimen,but this regimen often fails to collect a sufficient number of stem cells, especially for poorly mobilized patients.However,previous studies have shown that the mobilization effect of cytarabine plus etoposide and G-CSF seems to have a higher mobilization efficacy. The purpose of this study is to retrospectively compare the mobilization effects of using cytarabine ,etoposide plus polyethylene glycol recombinant human granulocyte stimulating factor(PEG-rhG-CSF)(EAP) and Cy+G-CSF in proven poor mobilizer or predicted poor mobilizer of MM or lymphoma. A total of 43 patients were mobilized by EAP regimen and the 44 patients by Cy+G-CSF, including 56 patients with MM and 31 patients with lymphoma.Both groups were comparable. The target yield of 2×10^6 $CD34^+$ cells/kg was achieved in 90.7% (EAP) and 70.7% (Cy) of patients(P=0.003) by 1.3 and 1.6 apheresis (means).By single apheresis in 76.7% (EAP) and 29.5% (Cy) of patients achieve the ideal yield of 5×10^6 $CD34^+$ cells/kg .EAP mobilization resulted in higher peak concentration of CD34+ cells in blood in the first apheresis (median 59.4 vs 9.5/μL, $p<0.001$)and second apheresis(median 23.2 vs 8.5/μL, p=0.001)compared to Cy mobilization. The median time of antibiotic administration in EAP mobilization was shorter than that in Cy mobilization (median 1.2 vs 3.1/d, p=0.041). The toxicity is different,the median time of agranulocytosis (median 1.2 vs 3.1/d, p=0 .003) after EAP mobilization were shorter than those after Cy,however, the median time for thrombocytopenia gr.4 (median 0.5 vs 0.2/d, p=0.001) was longer in the EAP group. In view of these results, we conclude that mobilization with EAP is excellent mobilization regimen with acceptable toxicity and could be considered in MM and lymphoma patients with factors of poor mobilization.

Disclosures No relevant conflicts of interest to declare.

Results of CD34+ cell harvest

	EAP（N=43）	CTX（N=44）		P-value
No. of patients with ≥2×10⁶CD34+ cells/kg	41（95.3%）	28（63.6%）	X^2=13.328	P=0.003
No. of aphereses	1（1-2）	2（1-3）	Z=-2.010	P=0.044
Day 1 CD34+ cells ≥2×10⁶/kg	39（90.7%）	21（47.7%）	X^2=18.761	P=0.000
Day 1 CD34+ cells≥5×10⁶/kg	26（60.5%）	3（6.8%）	X^2=28.165	P=0.000
Total no. of CD34+ cells≥5×10⁶/kg	33（76.7%）	13（29.5%）	X^2=19.443	P=0.000
No. of days to first apheresis	13（11-17）	15（12-18）	Z=-3.695	P=0.000
Total no. of CD34+ cells［×10⁶/kg］	8.85（2.56-41.27）	4.2（0.05-18.8）	Z=-4.582	P=0.000
% CD34+ cells in apheresis MNC	10.47（3.12-28.7）	22.64（3.19-47.07）	Z=-3.797	P=0.000
Day 1 pheresis day target［×10⁶/kg］	7.26（1.46-41.27）	2.18（0.05-10.42）	Z=-5.474	P=0.000
Day 2 pheresis day target［×10⁶/kg］	2.77（1.00-32.96）	2.06（0.16-10.8）	Z=-1.456	P=0.145
Day 3 pheresis day target［×10⁶/kg］	/	1.89（1.44-2.70）		
Hospital stays	12（6-19）	16(8-39）	Z=-3.089	P=0.002

Figure 1

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