[PF1-3] [10/18/2002 (Fri) 13:30 - 16:30 / Hall C]

Evaluation of Yields by Mobilization and Harvesting of Peripheral Blood Stem Cells

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Background : In the patients with hematologic and solid tumors, clinical application of peripheral blood stem cells (PBSCs) increases to reconstitute hematopoiesis after high-dose chemotherapy. To mobilize PBSCs, the hematopietic growth factors have been widely used as single treatment or after chemotherapy. The important issue in the collection of PBSCs is to predict their potential capability to reconstitute hematopoiesis, which depends on optimal time of leukapheresis and the quantity of collected PBSCs. The aim of this study is to evaluate optimal time for efficient mobilization of PBSCs and significance of mononuclear cells(MNC), CD34+ cells, and CFU-GM colonies as the PBSCs parameters in the groups using different mobilization methods.
Method : Forty-eight cases of PBSCs mobilization with 146 cycles of leukapheresis performed from 1998 to June 2001 were reviewed, retrospectively. These cases were classified into three groups by mobilization method. In group 1 and 2, PBSCs were mobilized by hematopoietic growth factors after chemotherapy (group 1, nadir WBC less than 103/uL , group 2, nadir WBC over 103/uL). In group 3, PBSCs were mobilized by hematopoietic growth factors alone. The number of mononuclear cells(MNC), CD34+ cells, and CFU-GM colonies in leukapheresis products were measured. Relationship between these PBSCs parameters and clinical characteristics was analyzed, and inter- and intra-group comparisons of these PBSCs parameters were performed.
Results : Total 48 PBSCs mobilizations were performed and followed by total 146 and mean 3 leukapheresis per mobilization. In group 1 and 2, first leukapheresis was done on 14 days after mobilization chemotherapy, and 5 days after hematopoietic growth factor administration in group 3. Average number of PBSCs parameters in leukapheresis products were as follows: MNC 6.93'108/kg, 7.0'108/kg, and 8.8'108/kg, CFU-GM 37.20'104/kg, 20.77'104/kg, and 8.51'104/kg, CD34+ 21.56'106/kg, 21.87'106/kg, and 18.55'106/kg, in group 1, 2, 3, respectively. The differences of average MNC, CD34+ cell, and peak of CD34+ cell per leukapheresis among groups were statistically insignificant. The average numbers of CFU-GM per leukapheresis in group 1 were significantly higher than those of group 3(11.19'104/kg vs 2.90'104/kg, p=0.044). In group 1 and 2, positive correlations among MNCs, CFU-GM colonies, and CD34+ cell were observed, but not in group 3. Correlations between WBC on 1st leukapheresis and these PBSCs parameters were positive in group 1. Negative correlation between number of prior chemotherapy and the PBSCs parameters was observed. In group 1, increase ratio of WBC during recovery period was positively correlated with the PBSCs parameters without statistical significance. Sufficient dose of CD34+ cells requiring for reconstitution of hematopoiesis (5'106 cells/kg) was harvested in 85% of group 1 and 2, but in 58.3% of group 3. In 70% of cases, the number of CD34+ cells after 1st leukapheresis reached 1'106 cells /kg minimally required for hematopoiesis.
Conclusions : MNC, CD34+, and CFU-GM each other had positive correlation. Higher number of WBC on leukapheresis had higher harvested yield in group 1. More PBSCs products in leukapheresis were harvested when PBSCs were mobilized by growth factor after chemotherapy than by growth factor alone.

[PF1-4] [10/18/2002 (Fri) 13:30 - 16:30 / Hall C]

Drug Use Evaluation of Hypoglycemic Agents in Type 2 Diabetes

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Background and Purpose : Complications of diabetes increase morbidity and motality and decrease quality of life. Recently, UKPDS has been reported that strict regulation of blood glucose, hypertension and hyperlipidemia could decrease complications of type 2 diabetes.
This study evaluated use of hypoglycemic agents, control of blood glucose, frequency of complications and preventive management at a local 2ndary hospital in Korea.
Methods : The medical records of 208 type 2 diabetic patients who have had insulin or oral hypoglycemic agents at least 6 months were reviewed retrospectively. Data collection and analysis included diabetes-related characteristics, administered hypoglycemic agents, changes of hypoglycemic agent regimen, blood glucose changes, HbA1c changes, blood pressure changes, blood cholesterol changes, risk factors, complications and medications related to complications and risk factors.