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Meeting abstract

Hematopoietic stem cell transplantation in Multiple Myeloma. Experience of the Instituto Nacional de Cancerologia, Mexico

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Background

The failure of conventional therapy to cure multiple myeloma has led investigators to test the effectiveness of high dose chemotherapy and hematopoietic stem cell transplantation. The objective of this study was to determine the mortality and morbidity in patients with multiple myeloma treated with hematopoietic stem cell transplantation at our institution.

Materials and methods

We reviewed the charts of patients with multiple myeloma, who received high dose chemotherapy and hematopoietic stem cell transplantation, at the Instituto Nacional de Cancerologia from 1991 to march 2006. We recorded the demographic variables, the type of transplant, the conditioning regimen, number of CD34+ cells transfused, number of platelets and red blood cells transfusions, neutropenia and thrombocytopenia duration. We also analyzed the adverse events related to the procedure.

Results

We did 18 peripheral blood stem cell transplants in 14 patients with MM, from 1991 to march 31, 2006. Nine were female and five male. Median age was 51.5 years (range 38 to 63 years). Regarding the monoclonal protein, 10 cases were IgG (5 lambda and 5 kappa), 2 IgA (1 kappa and 1 lambda), and 2 cases light chain (1 lambda and 1 kappa). Ten patients had stage II. Treatment before the transplant consisted in 1 to 4 chemotherapy regimens, mainly VAD, melphalan-prednisone and thalidomide-dexamethasone. In 3 patients the transplant was allogeneic and in 11 autologous, 4 patients had a second transplant (tandem). We used filgrastim for stem cell movilization, and in 1 patient filgrastim and cyclophosphamide. The cells were collected with a standard apheresis procedure. Median CD34+ cells transplanted were 2.04 × 106/Kg. In the autologous setting we used Melphalan 200/m2 (po) and in the case of the allotrasplant 2 cases were conditioned with Busulfan-cyclophosphamide and 1 patient with BEAM and Alemtuzumab. The median time to achieve >500/mm3 neutrophils in the patients with tandem transplants was 4 days for the first procedure and 7 for the second, in the patients with 1 autologous transplant the median time was 13 days and for the patients with allogeneic transplant was 21 days. Median time to >20 000/mm3 platelets were, 8 and 9 days for the tandem procedures, 14 days for the single autologous transplant and 22 days for the allogeneic transplant. The patients with autologous transplant received form 0 to 3 pack red cells and from 1 to 4 platelets transfusions. The most frequent significant adverse event was infection. One patient died of cerebral hemorrhage on day +6, in the allotransplant group, No transplant related deaths ocurred in the autotransplant group.

Conclusion

Autologous transplant conditioned with oral melphalan in patients with MM is a very safe procedure when performed at the INCAN. Infections are frequent and commonly related to the venous access. Allotransplants have a high mortality.