

High-dose Therapy followed by Autologous Haematopoietic Stem Cell Transplantation in Multiple Myeloma

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Abstract

Introduction and Objectives: The median survival of patients with multiple myeloma (MM) after conventional chemotherapy is 3 years or less. Previous studies have shown that high-dose therapy, supported by haematopoietic stem cell rescue, improves survival of patients with MM. We analysed the outcome of 29 myeloma patients who had autologous haematopoietic stem cell transplantation (AH SCT) in our institution over an 8-year period. **Materials and Methods:** Between May 1993 and August 2001, 29 patients with MM underwent high-dose therapy followed by unpurged AH SCT. There were 16 male and 13 female patients. The median age of the patients was 52 years (range, 31 to 67 years). All patients had at least a partial remission after initial chemotherapy. The preparative regimen for the AH SCT was melphalan 200 mg/m² in 25 patients, melphalan-total body irradiation in 1 patient, and busulphan-cyclophosphamide (BuCy) in 3 patients. Twenty-three patients received peripheral blood stem cells (PBSCs) autograft, 3 patients received bone marrow autograft and 3 patients received both. **Results:** Treatment-related death occurred in only 2 patients (7%). The median time to neutrophil engraftment was 11 days (range, 8 to 22 days). With a median follow-up period of 18.5 months, the 5-year overall survival (OS) and event-free survival (EFS) rates were 71% and 21%, respectively. The OS was found to be superior to a group of historical controls who were treated with conventional chemotherapy without transplantation (71% vs 19%; P = 0.014). **Conclusion:** In conclusion, high-dose therapy followed by AH SCT is safe and beneficial for patients with MM.

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