

Hematopoietic Stem Cell Transplantation Experience: A Retrospective Analysis from Largest Center of India's Largest State

Sandeep kumar Jasuja¹, Mukesh Kumar^{1*}, Aditi Mittal¹, Krutika Goyal¹, Sajna Choudhary¹, Ashish Dayma¹, Linu Hooda^{1,2} and Jaiprakash Yadav¹

¹Department of Medical Oncology & BMT, State Cancer Institute, Jaipur, India

²Department of Pediatric Oncology & BM T, State Cancer Institute, Jaipur, India

Correspondence should be addressed to Mukesh Kumar, Assistant Professor Department of Medical Oncology & BMT, B-21, Jamnapuri, Murlipura, Jaipur, India

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ABSTRACT

OBJECTIVES

The present study aimed to describe the clinical characteristics and outcomes of patients with malignant and non-malignant disorders who underwent hematopoietic stem cell transplantation at largest public Hospital (SMS Hospital) of Rajasthan, India.

METHODS

This was a retrospective study conducted at the Department of Medical oncology & Stem cell transplant, SMS hospital, Jaipur, India. The study included patients of either sex who had undergone any type of Hematopoietic stem cell transplantation during 2009 to June 2021. Data collected for retrospective observational analysis included demographic and clinical details including age, sex, clinical diagnosis, type of transplant, time of transplant, treatment regimen, status at transplant, acute/chronic GVHD, date of discharge/last follow-up/death, clinical outcome, and cause of death.

RESULTS

A total of 100 patients which underwent HSCT from initiation of transplant in 2009 at our Center to June 2021 were included (mean age: 29.9 years). Out of 100 patients, 49% of patients underwent autologous transplantation, while 51% underwent allogeneic transplantation during this period. Out of 51% of patients which underwent allogeneic transplant, 17.6% were haploidentical stem cell transplant. The most common malignancies for which patients underwent HSCT at our center was multiple myeloma (29.0%), followed by aplastic anemia (24.0%), and Hodgkin's lymphoma (12.0%). Other diseases for which patients underwent HSCT at our center are non-Hodgkin lymphoma, amyloidosis, multiple sclerosis, Thalassemia, germ cell tumor, chronic myeloid leukemia, Acute Myeloid leukemia, Myelodysplastic syndrome, Neuroblastoma, dyskeratosis congenita, primary CNS lymphoma and congenital dyserythropoietic anemia type 2. Majority of patients which underwent stem cell transplant were in complete remission (82%) at the time of transplant. Acute graft versus host disease (GvHD) was observed in 52.9% of patients while 11.8% of patients reported chronic GvHD in allogeneic Hematopoietic stem cell transplant.

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Total of 84 patients survived while 16 patients died post-transplant. Majority of patients died due to infection (60.0%) and GvHD (20.0%). The overall mean survival time was 1540 days. The mean survival time in patients with allogenic transplants was significantly higher than those with autologous transplant (1907.2 vs. 452.3 days; $p = 0.042$).

CONCLUSION

With overall higher survival rate and overall mean survival of more than four years, HSCT in Indian settings may be considered as a promising treatment for patients with benign or malignant diseases.

KEYWORDS

Benign; GvHD; Malignant; Mortality; Survival outcome

ABBREVIATIONS

GVHD: Graft versus Host Diseases

HSCT: Hematopoietic Stem Cell Transplant

SMS: Sawai Man Singh

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