Efficacy and Reliability of T Cell Depleted Haploidentical Stem Cell Transplantation in Hematologic Disorders

Burak DEVÈCI¹, , Yesim OZDEMIR²
¹Medstar Antalya Hospital, ²Memorail Sisli Hospital

ABSTRACT

A promising recent strategy for haploidentical transplantation is the depletion of T lymphocytes based on the selective elimination of T cells by manipulation, which enables a very low incidence of transplantation-related mortality, and graft-versus-host disease (GVHD). It is more expensive than the conventional unmanipulated methods, and further, requires dedicated transplant centers and sufficient stem cell processing facilities. This retrospective study aimed to evaluate the relapse, survival, and clinical data of the patients and to analyze the outcomes of the technique.

RESULTS

The median age of the patients at the time of HSCT was 41.5 years (range, 20-70 years); 22 (39.3%) patients were female. The diagnosis for the patients was as follows: acute myeloid leukemia (AML) (46.4%), myelodysplastic syndrome (MDS) (5.4%), acute lymphocytic leukemia (ALL) (28.6%), myelofibrosis (MF) (3.6%), Hodgkin's lymphoma (HL) (7.1%), aplastic anemia (AA) (7.1%), and chronic lymphocytic leukemia (CLL) (1.8%). Of the patients, 19.6% had comorbidities where 8.9% had diabetes mellitus (DM), 14.3% had hypertension (HT), and 7.1% had coronary artery disease (CAD). The mean anemia (AA) (7.1%), and chronic lymphocytic leukemia (CLL) (1.8%). Of the patients, 19.6% had comorbidities where 8.9% had diabetes mellitus (DM), 14.3% had hypertension (HT), and 7.1% had coronary artery disease (CAD). The mean of total cure number until transplantation was 7.2±3.0. The mean interval from diagnosis to transplantation was 610.3±710.5 days.

After the transplantation, half of the patients (50.0%) needed immunosuppressive drugs and 17.9% of the patients experienced a post-transplant relapse. The median intervals for platelet and leucocyte engraftment were 12 days (range, 0-43 days) and 11 days (range, 0-34 days), respectively. Six patients (10.7%) had engraftment failure. Acute GVHD was seen in 19 (33.9%) patients and chronic GVHD in 8 (14.3%) patients. The mortality rate was 55.4% where transplant-related mortality (TRM) and non-transplant-related mortality (NTRM) were 25.0% and 30.4%, respectively. The 100-day mortality rate was 19.6%. The median OS days was 1101 days (142-3813 days) whereas the median progression-free OS was 302.5 days (11-2479 days).

CONCLUSION

T-cell depleted HSCT is an effective and reliable technique that has the potential to decrease morbidity and improve relapse-free survival for patients requiring unrelated donor transplantation for hematologic malignancy. The data presented here contribute to the literature and may be utilized in similar medical interventions in other clinics.

REFERENCES


www.costemlive.cme-congresses.com