

Abstract: P1350

Title: COMPARISON OF INCIDENCE AND CLINICAL CHARACTERISTICS OF GRAFT VERSUS HOST DISEASE AMONG RECIPIENTS OF ALLOGENEIC STEM CELL TRANSPLANTATION FROM IDENTICAL VS HAPLOIDENTICAL DONORS IN COLOMBIA

Abstract Type: Poster Presentation

Topic: Stem cell transplantation - Clinical

Background:

Allogeneic peripheral blood stem cell transplantation (Allogeneic-PSCT) has increased in recent years in Latin America.

Transplants from siblings who are human leukocyte antigen HLA-identical have been associated with the most favorable outcomes. Haploidentical donors offer patients without a matched donor the opportunity to receive potentially curative treatment. Graft-versus-host disease (GVHD) is one of the main complications of Allogeneic – PSCT. GVHD prophylaxis includes post-transplant cyclophosphamide (PTCy) which has increased haploidentical donor success with low incidence of GVHD, increasing its use with some studies showing mixed results.

Aims:

To identify and describe differences in the incidence, sociodemographic, and clinical characteristics of (GVHD) in the first year after Allogeneic-PSCT between Identical -sibling transplant (IST) vs Haploidentical-sibling transplant (HST), in a bone marrow transplant center in Bogotá Colombia.

To associate the different variables with the occurrence of GVHD using a logistic regression model.

Methods:

An analytical study based on a retrospective cohort of adult patients with malignant and benign hematological disorders who received an Allogeneic-PSCT between 2014 and 2022, in a bone marrow transplant center in Bogotá Colombia. Data were obtained from the medical records and a database was created. A descriptive analysis of the sociodemographic, clinical transplant-related variables was performed using measures of central tendency and dispersion.

The primary outcome was the incidence of GVHD, disease-related, treatment-related, and patient-related variables were included in the univariate and multivariate analyses using a stepwise forward selection technique, to test the association between the type of transplant and the presence of acute and chronic GVHD, discriminating between each one. A two-tailed test was used to determine statistical significance, with a p-value of <0.05 defined as significant.

Results:

A total of 152 patients were included (Identical-sibling transplant (IST) n = 108; Haploidentical-sibling transplant (HST) n = 44). The mean age was 45 years old, 41% were men. The main pathologies were acute myeloid leukemia 37.5%, acute lymphoid leukemia 36.2%, and aplastic anemia 7.9%.

Intensive care unit admission at 1-month post-transplant was bigger in: HST 20.4% vs IST 4.6% p < 0.005. Mortality at 1 year post-transplant was bigger in HST 54.8% vs IST 29.7% p < 0.008. There were no differences in relapse at one year between groups IST 28% vs HST 19% p < 0.56.

The incidence of acute GVHD was bigger in IST 63.8% vs HST 36.6% p < 0.003. The grade I-II and III-IV acute GVHD was 48%, 18%, 10.6% and 5.9% respectively. The main involvement was skin (44%) and liver (33%).

There were no differences in the incidence of chronic GVHD at 1 year HST 81% vs IST 66% P <0.09. In multivariable analysis, there was no impact of the type of allogeneic transplant on acute GVHD; in contrast, HST was a risk factor for the development of chronic GVHD (OR 6.93 (IC 95% 1.72- 47.07) and post-transplant cyclophosphamide (PTCy) was a protective factor of acute GVHD(OR 0.32 (IC 95% 0.12-0.83)

Summary/Conclusion:

GVHD remains a common complication in allogeneic-PSCT recipients. We found the use of post-transplantation cyclophosphamide to be a protective factor for acute GVHD. The risk factors associated with chronic GVHD should be investigated and intervened to reduce its occurrence and improve patients' quality of life.

Keywords: Graft-versus-host disease (GVHD), Acute graft-versus-host disease, Chronic graft-versus-host, Allogeneic peripheral blood stem cells