TREATMENT PATTERNS AND RESPONSE OF GRAFT-VERSUS-HOST DISEASE IN THE CURRENT ERA OF POST-TRANSPLANT CYCLOPHOSPHAMIDE

Ana Lisa Basquiera, Cristian Rodriguez, Gonzalo Bentolila, Georgina Bendek, Gonzalo Ferini, Mercedes García, Juliana Martinez Rolón, Jorge Arbelbide

Hospital Privado Universitario de Córdoba-Instituto Universitario de Ciencias Biomédicas de Córdoba; FUNDALEU, Buenos Aires; Hospital Italiano, Buenos Aires, Argentina

Introduction: Graft-versus-host disease (GVHD) remains a major complication following allogeneic hematopoietic cell transplantation (Allo-HCT). This study evaluated patterns of GVHD presentation and response to treatment.
Methods: We conducted a retrospective analysis of 577 patients aged ≥18 years who underwent Allo-HCT at three Argentine centers from 2017 to June 2024. We assessed the cumulative incidence of acute (aGvHD) and chronic GVHD (cGvHD), and non-relapse mortality (NRM).
Results: Median patient age was 47 years (IQR 33–60). Donor types included matched sibling (n=187, 32.4%), unrelated (n=195, 33.8%), and haploidentical (n=195, 33.8%). Myeloablative conditioning was used in 294 patients (51.0%). GVHD prophylaxis included anti-thymocyte globulin (ATG) in 202 (35.2%) and post-transplant cyclophosphamide (PT-Cy) in 256 (44.4%). With a median follow-up of 43.6 months, one-year incidence of grade 2–4 and grade 3–4 aGvHD was 169 (29.1%) and 51 (8.7%) patients, respectively. Median Minnesota score was 4.0 (IQR 2–13), significantly lower in patients receiving PT-Cy ($p=0.030$). Steroid-refractory aGvHD correlated with higher Minnesota scores ($p<0.001$) and absence of PT-Cy ($p=0.033$). Second-line treatment was indicated in 61 patients (36.1%), including ruxolitinib (n=26, 42.6%), infliximab (n=24, 39.3%), mycophenolate (n=5, 8.2%), and extracorporeal photopheresis (ECP; n=8, 8.2%). NRM was 12.8% without second-line therapy, 15.4% with ruxolitinib, and 35.5% with other drugs ($p=0.007$). Third-line treatment was administered to 23 patients. Progression to cGvHD occurred in 62 patients (36.7%). Four-year cumulative incidence was 20.6% (n=115 patients), with 57.4% moderate/severe; 51% had prior aGvHD. Systemic treatment was required in 89.6% (steroids, n=91; ruxolitinib, n=12); 36 patients (31.3%) required ≥2 treatment lines. NRM was 4.4% for mild, 5.7% for moderate, and 35.6% for severe cGvHD ($p<0.001$).
Conclusions: Most GVHD patients required systemic therapy. PT-Cy use was linked to better steroid response in aGvHD, underscoring the need to identify predictors of treatment response and outcomes.