for age. Only one patient in the LEC group died within the first 100 days of ASCT, showing a trend toward lower TRM. OS at 2-years for the two conditioning protocols was 85.31% for LEC and 55% for CBV, respectively (p = 0.001). **Discussion:** The Autologous Stem Cell Transplantation (ASCT) is considered the consolidation treatment of choice for patients with relapsed Hodgkin's or non-Hodgkin's lymphoma, and the first line of treatment for eligible patients with aggressive T-cell or mantle cell non-Hodgkin's lymphoma. In this study, the LEC protocol, the conditioning regimen studied, proved to be safe and in line with what is desired for the treatment of patients with lymphoma today. With the scarcity and sometimes discontinuation of some chemotherapy drugs in Brazil, the use of alternative regimens, such as the one in this study, which demonstrated efficacy and safety, is corroborated. **Conclusion:** LEC proved to be a safe protocol, with OS at 24-months being higher in the LEC group than in the CBV conditioning groups. Despite the good results with LEC, unfortunately, there is a new shortage of both lomustine and carmustine in Brazil, which will require the use of new alternative protocols. **Conflicts of interest:** The author declares no conflict of interest.

https://doi.org/10.1016/j.htct.2024.09.1731

RETROSPECTIVE ANALYSIS OF CHIMERISM ON PEDIATRIC PATIENTS WITH LEUKEMIA POST ALLOGENEIC STEM CELL TRANSPLANT

JPGM Biasi [a], MF Caleffi [b], TT Barros [b], AFR Taborda [b], AC Rheinheimer [b], ALM Rodrigues [b], AA Zanette [b]

[a] *Faculdade Evangélica Mackenzie do Paraná, Curitiba, PR, Brazil*
[b] *Hospital Erastinho, Curitiba, PR, Brazil*

Introduction: Allogeneic Stem Cell Transplant (ASCT) is a curative strategy for varioushematological diseases. Following ASCT, chimerism analysis becomes instrumental inassessing engraftment success, guiding immunosuppression strategies, anddetermining the necessity of interventions such as Donor Lymphocyte Infusion (DLI). Inleukemia cases, chimerism evaluation is a crucial tool for predicting and monitoringdisease relapse. However, the routine chimerism and its efficacy in the pediatricpopulation remain subjects of ongoing debate, necessitating further studies. **Objective:** Assess the correlation between chimerism levels, timing of testing, and their predictivevalue for disease relapse and survival among pediatric patients with leukemiapost-ASCT. **Materials and methods:** This retrospective study enrolled pediatric patientsdiagnosed with leukemia who underwent ASCT. Patients with other hematologicaldiseases and those who received autologous stem cell transplants were excluded fromthe analysis. This retrospective study was conducted in a tertiary care center, and thedata was collected from 2021 until January 2024. Demographic characteristics, survival,and clinical/laboratory findings, including chimerism analysis of 1-year after ASCT viaimmunophenotyping using flow cytometry. The Chimerism analysis was performed at sixcheckpoints (D+30, D+60, D+100, six months, nine months, and 12 months). Thestatistical analysis was made using descriptive statistics. **Results:** Of the 90 patients cohort, 85 (94%) patients underwent a single transplant, while 5 (6%) patients had twobone marrow transplants. Among the patients who achieved successful engraftment, 19 (21%) experienced disease relapse, with 9 relapses occurring within the first yearpost-ASCT. Notably, all relapses between D+100 and 12-months post transplantoccurred in patients with complete chimerism. The 9-month checkpoint exhibited thelowest patient attendance, with only 44% of patients having complete chimerism dataand 36 missing results. Conversely, the D+60 checkpoint had the fewest missing tests,with only 13 absences. The initial three checkpoints (D+30, D+60, D+100) demonstrated higher attendance rates than later. The majority of deaths occurred duringthe D+100 period, with 6 out of 9 relapses occurring during this timeframe. It was alsothe period with the higher percentage of mixed chimerism, having 22% in the D+30, 21% in the D+60, and 17% in the D+100. **Conclusion:** Overall, these findings suggestthat chimerism analysis, particularly at critical time points such as D+100, is valuable tohelp predict disease relapse in pediatric patients post-transplant and their survival.However, challenges in patient attendance at certain checkpoints indicate the need forimproved monitoring strategies to optimize patient outcomes.

https://doi.org/10.1016/j.htct.2024.09.1732

CONTROLLING PATIENTS'WEIGHT: IS THERE A RELATIONSHIP BETWEEN OBESITY AND GRAFT-VERSUS-HOST DISEASE IN BONE MARROW RECIPIENTS? A SYSTEMATIC REVIEW

EPL Sobrinho, OMV Neto, BF Felix, GHR Teixeira, MRFR Neto, CDC Gentile, EAC Lima, PE Oliveira, JM Dubanhevitz, LP Amorim

Universidade Federal do Ceará (UFC), Fortaleza, CE, Brazil

Objectives: This review aims to evaluate the impact of obesity on Bone Marrow Transplant (BMT) recipients diagnosed with Graft-Versus-Host Disease (GVHD), in different age groups. **Material and methods:** A search was carried out on the PubMed and Virtual Health Library platforms, using the descriptors "Graft-versus-Host Disease"and "Obesity". Articles in English published between 2011 and 2021 were selected. Rayyan® and Microsoft Excel® software were used to select manuscripts and interpret results. **Results:** 47 articles were found. 7 duplicates and 32 articles that did not focus on the relationship between obesity and GvHD were removed. 8 articles were included in this study, of which 2 are meta-analyses and 6 are retrospective cohorts. 24.9% of BMT recipients are obese (Pereira et al., 2015). Fuji et al. (2015) points out that the three main prognostic nutritional factors in BMT are obesity, diabetes mellitus and liver dysfunction. In children, the meta-analysis by Yaseri et al. (2021) showed a higher

prevalence of acute GvHD when compared to non-obese children (OR = 2.13, 95% CI: 1.5–3.02, p < 0.001); while the work by Barker et al. (2011) showed a 1.55 times higher risk (95% CI: 1.00–2.41; p = 0.05). The meta-analysis by Nakao et al. (2014), without age group restriction, obtained a relative risk of 1,186 (95% CI: 1,072–1,312) of acute GvHD in overweight individuals, compared to non-overweight patients. Another important criterion for discussion is acute post-BMT hyperglycemia, which is associated with a higher risk of acute GvHD, infection and mortality post-BMT (Fuji et al., 2015). In obese individuals, however, the study by Gebremedhin et al. (2013) concluded that, in these individuals, unlike non-obese individuals, severe hyperglycemia, developed in 30.5% of patients, did not significantly affect the risk of acute GvHD (none of the 34 obese subjects developed GvHD). The only study addressing geriatric obesity regarding the risk of GvHD states that there is no difference in the incidence of acute and chronic GvHD between obese and non-obese elderly people, one year after BMT (Voshtina et al., 2019). **Discussion:** Obesity is a global problem, and 12.5% of individuals are obese (PAHO, 2024). The studies retrieved indicate that there is a higher prevalence of this comorbidity in BMT recipients than in the general population. There are important variances in the values obtained for the relationship between obesity in BMT recipients and the development of GvHD, with one of the main factors involved in this difference being the age group of the patients. Acute hyperglycemia is harmful to newly transplanted patients, increasing the risk of GVHD, infections and BMT complications, and is intrinsically related to oxidative stress proposed by the release of chemokines. The study of a possible protective factor in obesity against the damage caused by acute hyperglycemia, especially regarding the risk of developing acute GvHD, deserves special attention from Onco-hematology. **Conclusion:** Obesity is a very likely and well-founded risk factor for the development of GvHD, and its prevalence is increased in BMT recipients. The care of obese patients, in specialized BMT services, involves increased attention to the risk of GvHD, which reduces quality of life, increasing the risk of infections and general mortality.

https://doi.org/10.1016/j.htct.2024.09.1733

ANÁLISE RETROSPECTIVA DA SOBREVIDA E FATORES ASSOCIADOS EM PACIENTES PEDIÁTRICOS COM ANEMIA APLÁSICA APÓS TRANSPLANTE ALOGÊNICO DE CÉLULAS TRONCO HEMATOPOIÉTICAS

JPGM Biasi [a], MF Caleffi [b], AFR Taborda [b], TT Barros [b], AC Rheinheimer [b], ALM Rodrigues [b], AA Zanette [b]

[a] *Faculdade Evangélica Mackenzie do Paraná, Curitiba, PR, Brasil*
[b] *Hospital Erastinho, Curitiba, PR, Brasil*

Introdução: A Anemia Aplásica (AA) é uma doença rara, sem predominância degênero, com maior incidência na infância e após os 60 anos, especialmente napopulação asiática. A AA pode ser classificada pelo grau de acometimento(Moderada, Severa, Muito Severa) e pela etiologia, afetando o prognóstico e aconduta terapêutica. A diferenciação é baseada em hemogramas, testes genéticos eimunológicos, além dos diagnósticos diferenciais como citopenia refratária esíndromes mielodisplásicas hipoplásicas que também devem ser excluídos porexames clínicos e laboratoriais. O Transplante de Células-Tronco Hematopoiéticas (TCHT) é um tratamento eficaz, especialmente em crianças, com taxas de sucessode 90% pela literatura internacional quando há doador aparentado idêntico.Transplantes haploidênticos ou de doador Não Aparentado (NAP) são consideradosem casos mais graves. No Brasil, as taxas de eficácia e sobrevida do TCHT pediátrico para AA são inferiores às observadas nos Estados Unidos e na Europa. **Objetivos:** Avaliar a sobrevida de pacientes pediátricos com AA após TCHT,analisando fatores como a origem do enxerto e a compatibilidade do doador. **Materiais e métodos:** Estudo realizado em um centro de saúde terciário, de janeirode 2021 a junho de 2024. Incluiu pacientes com AA até 21 anos submetidos aTCHT. Pacientes com outras doenças hematológicas, maiores de 21 anos ou quenão passaram por TCHT foram excluídos. Analisou-se a sobrevida, a origem doenxerto e a compatibilidade do doador, com metodologia estatística descritiva.Resultados: Foram identificados 11 pacientes com AA submetidos a TCHT, comquatro apresentando falha de pega, resultando em 15 TCHT no total. Um foiautólogo e 14 alogênicos (7 haploidênticos, 4 NAP, 2 aparentados). 9 enxertosforam de medula óssea e 6 de sangue periférico. 3 pacientes faleceram (28%), doisapós o segundo TCHT, com todos os óbitos relacionados ao transplante erealizados com sangue periférico e doadores haploidênticos. **Discussão:** O estudoconfirma a eficácia do TCHT no tratamento de AA em pediatria e a maiormortalidade desse tratamento na população brasileira. A escolha da fonte decélulas-tronco e a compatibilidade do doador são críticas para a sobrevida. Melhores resultados foram observados com medula óssea em comparação comsangue periférico, alinhando-se com a literatura. A falha de pega em quatropacientes e os óbitos sugerem necessidade de seleção cuidadosa de doadores emanejo pós-transplante rigoroso. Os óbitos podem apontar que transplantes comsangue periférico podem apresentar maior risco; entretanto, essa observação podeser uma limitação do estudo devido à pequena amostragem, já que todos os óbitosocorreram após o segundo TCHT, os quais todos foram realizados com sangueperiférico. Portanto, há necessidade de mais estudos para entender melhor osfatores que contribuem para a maior taxa de óbitos entre pacientes brasileirossubmetidos ao TCHT para tratamento de AA. **Conclusão:** A escolha da origem doenxerto e da compatibilidade do doador é fundamental para o sucesso do TCHT empacientes pediátricos com AA. Enxertos de medula óssea e doadores com maiorcompatibilidade resultam em melhores desfechos. As taxas de mortalidade sugerema necessidade de estratégias de tratamento individualizadas e gestão rigorosa dosriscos. Futuras pesquisas devem focar na otimização do tratamento para melhorar asobrevida e a qualidade de vida dos pacientes brasileiros.

https://doi.org/10.1016/j.htct.2024.09.1734