unadjusted analyses, platelet engraftment occurred later in HIV-positive participants. Multivariable analysis confirmed HIV-positive status as an independent predictor of delayed platelet engraftment ($\beta = 1.85$ days; 95% CI: 0.63–3.07; p = 0.003) and leukocyte engraftment ($\beta = 1.002$ days; 95% CI: 0.13–1.87; p = 0.025). Neutrophil engraftment was not significantly associated with HIV status (p = 0.075). Higher infused $CD34^+$ doses were consistently associated with faster recovery across all cell lineages, whereas the use of 10% DMSO as the cryopreservation solution was associated with longer engraftment times. **Discussion and conclusion:** In conclusion, this study provides novel evidence that HIV infection independently delays platelet and leukocyte engraftment after ASCT, even when controlling for cell dose and other key transplant variables. The magnitude of the effect on platelet recovery is clinically meaningful, with potential to increase bleeding risk, prolong transfusion dependence, and delay full hematologic recovery. These findings underscore the need for tailored supportive care, optimized $CD34^+$ collection, and proactive post-transplant monitoring in PLHIV. By addressing modifiable factors and integrating HIV-specific considerations into transplant planning, clinicians may mitigate the adverse impact of HIV on hematopoietic recovery. Future multicenter prospective studies with comprehensive immunologic profiling are warranted to elucidate underlying mechanisms and inform evidence-based guidelines. Overall, HIV infection should be recognized as an independent predictor of delayed engraftment after ASCT, reinforcing the importance of individualized transplant strategies for this population.

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IMMUNE EFFECTOR CELL-ASSOCIATED HLH IN HIGH TUMOR BURDEN PATIENTS TREATED WITH CAR-T: LESSONS FROM BRAZILIAN CASES

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Introduction: CAR-T cell therapy is based on the modification of T lymphocytes to express chimeric receptors. Although effective in the treatment of B-cell malignancies, these therapies are associated with inflammatory toxicities such as Cytokine Release Syndrome (CRS), Immune Effector Cell-Associated Neurotoxicity Syndrome (ICANS), and, more rarely, Immune Effector Cell-Associated Hemophagocytic Lymphohistiocytosis (IEC-HLH). We report two cases of IEC-HLH in patients who received anti-CD19 CAR-T infusion as part of a Brazilian academic study. **Case report:** Case 1: Male, 70 years old, with refractory CLL (TP53 mutated, 11 prior lines, including allo-HSCT). Pre-CAR-T bone marrow showed 83% clonal lymphocytes. Developed grade I CRS on D+1, treated with tocilizumab 8 mg/kg. On D+15, presented with fever, cytopenias, hyperferritinemia (7,417 ng/mL), hypofibrinogenemia, hypertriglyceridemia, elevated transaminases and LDH, with an H-Score of 200. Treated with a cumulative dose of 329 mg dexamethasone and anakinra (10–5 mg/kg/day) for 7 days, achieving complete resolution. Case 2: Male, 9 years old, with ALL and bone marrow showing 95% blasts, received prophylactic tocilizumab. Developed grade III CRS (D+1) and grade IV ICANS (D+5), both treated with immunosuppressants. On D+6, presented with findings suggestive of IEC-HLH: ferritin 43,044 ng/mL, cytopenias, hypofibrinogenemia, elevated transaminases, and triglycerides, with an H-Score of 184. Received anakinra (10–7 mg/kg/day for 7 days) with complete clinical and laboratory response. On D+30 bone marrow reassessment, he achieved MRD-negative complete remission, maintained to date (D+367). **Conclusions:** Both patients had high tumor burden and developed IEC-HLH later than CRS onset. The CLL patient showed late CAR-T cell expansion (0.45% to 38.1% between D+14 and D+21) coinciding with a decline in CD19+ cells (82.2% to 1.2%), suggesting a correlation between cell expansion and IEC-HLH. Both cases were treated with anakinra, in line with prior experience in secondary HLH. Therapeutic response was satisfactory. Both patients remain in complete remission (>1 year post-infusion). These cases highlight the importance of recognizing IEC-HLH in patients with high tumor burden. The favorable outcomes with anakinra suggest its potential as a standardized therapeutic strategy. Specific protocols are essential for the diagnosis and management of this rare but potentially severe complication.

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IMPACT OF SHORT-TERM TRANSFER FROM NITROGEN TO -80°C FREEZER ON THE VIABILITY OF CRYOPRESERVED CELLULAR THERAPY PRODUCTS: AN IN VITRO STUDY

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Introduction: Liquid or vapor nitrogen is considered the gold standard for the storage of cellular therapy products, ensuring long-term viability and stability. However, contingency planning remains a challenge, as each cryopreserved unit requires an available slot in another tank for redundancy in case of failure. Additionally, most transplant centers in Brazil lack liquid nitrogen storage tanks, and cryopreserved cellular products should be delivered before conditioning begins. **Aim:** This study aimed to evaluate the impact of short-term