DRM positiva por citometria de fluxo com 2,5% blastos. Resposta completa a blinatumomab mas quimerismo misto (198 XX e 2XY) após o 4°ciclo, sem doença. Voltou a receber DLI com blinatumomab 3 x 10^7CD3/kg e 1 x 10^8CD3/kg, sem DECH. Apresentou encefalite por Coxsackie que desencadeou DECH aguda e crônica esclerodermóide em boca e pele. Atualmente está 7 anos pós-TCTH, em remissão, com quimerismo completo, usando imunossupressores para tratamento de DECH crônica extensa. 2° paciente, 13 anos, TCTH haploidêntico, medula do pai para anemia falciforme em 2019. Condicionamento fludarabina-ciclofosfamida, ATG coelho-TBI-400cGy; ciclofosfamida-pós-sirolimus-MMF. Recebeu 9 x 10^6 CD34/kg. Quatro meses pós TCTH, mesmo já tendo atingido quimerismo completo, apresentou quimerismo decrescente com nadir nove meses após TCTH de 66% de células alogênicas. Constatada má aderência ao sirolimus. Recebeu duas DLIs com um mês de intervalo, 1 x 10^6CD3/kg e 5 x 10^6CD3/kg com melhora do quimerismo, estável em 90% de células alogênicas, apesar de DECH crônica liquenóide em pele responsiva a corticoide. 3° paciente, 13 anos, TCTH haploidêntico com células-tronco periféricas da irmã em fevereiro/21 para LLA B refratária que só respondeu ao blinatumomab. Condicionamento fludarabina-TBI-1200cGy, ciclofosfamida pós, ciclosporina-MMF. Quimerismo misto presente desde 1ªavaliação medular pós-TCTH, chegando a 39% de células alogênicas três meses pós-TCTH, mas sem recidiva. Recebeu DLI 1 x 10^6CD3/kg e 5 x 10^6CD3/kg com intervalo de um mês. Atingiu quimerismo completo três meses após 1ªDLI, mas também apresentou DECH crônica moderada liquenóide pele e TGI. **Conclusão:** DLIs reverteram quimerismo misto nos três pacientes sem eventos adversos associados à infusão, mas com DECH crônica em todos, responsiva a corticóide. A DLI se mostrou segura, com resultados potencialmente promissores para reverter o quimerismo misto após o TCTH haploidêntico.

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SUSTAINED REMISSION WITH ANTI-CD19 CAR-T CELLS AS SIXTH LINE THERAPY IN A RELAPSED/REFRACTORY DIFFUSE LARGE B CELL LYMPHOMA (DLBCL) PATIENT AND IMMUNE RECONSTITUTION: A CASE REPORT

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Introduction: Anti-CD19 CAR-T cell therapy has been associated with improved outcomes in R/r DLBCL. In Brazil, management of patients treated with this therapy can be cumbersome due to the lack of experience with this therapeutic product in most centers. **Objective:** Describe a case of successful anti-CD19 CAR-T cell treatment as salvage therapy in a patient previously exposed to 5 therapy lines, including autologous HSCT, as well as detail the patient's follow-up post CAR-T cell infusion. **Methods:** Case description, with patient's laboratory and imaging results during follow-up. **Results:** A 62-year-old male patient with a 7-year history of DLBCL, previously treated with 5 lines of therapy, was referred to Cleveland (Dr Marcos de Lima) to receive anti-CD19 CAR T-cells in March 2020 following disease relapse after autologous transplant and refractoriness to later therapeutic lines. Referral was due to the lack of available therapies with curative intent in Brazil, associated to the availability to enroll in an anti-CD19 CAR-T cell therapy clinical trial (CASE 2417) at the Seidman Cancer Center in Cleveland, Ohio, USA. PET-CT results before CAR-T cell treatment are shown in Figure 1. The infused cell product was manufactured with the automated CliniMACS®Prodigy platform using a commercial lentiviral vector. As pre-infusion lymphodepletion therapy, the patient received cyclophosphamide 60 mg/kg on D-6 and fludarabine 25 mg/m^2 on days D-5 to D-3. The infusion of the CAR T cells occurred on 20/02/2020 – cellular dose: 2 x 10^6/kg. As early complications, the patient had grade II CRS and severe neutropenia related to the use of sulfamethoxazole-trimethoprim for pneumocystis prophylaxis. There was no neurotoxicity. Patient remained hospitalized for a month, and returned to follow-up at HC/FMUSP in May 2020. During patient follow-up, regular evaluation of immune reconstitution is being performed – table 1. Analysis of immune reconstitution by flow cytometry after CAR-T cell therapy showed reconstitution of CD3+, CD8+ and NK (CD3-CD16+CD56+) lymphocytes, reduced levels of CD4+ lymphocytes and absence of CD19+ B cells (Table 1). Given the old age of the patient, exposure to multiple lines of therapy and lack of consensus in the literature, we opted for monthly immunoglobulin replacement in the first year. Patient is receiving infectious prophylaxis with acyclovir and monthly pentamidine. There have been no infectious complications so far. Disease reassessment with PET-CT 6 and 12 months after therapy demonstrated a complete response (CR) (Figure 2). Although we do not have available data regarding CAR-T cell persistence, the serial evaluation of lymphocyte subpopulations confirms persistent B cell aplasia. **Conclusions:** Anti-CD19 CAR T-cell therapy is efficient therapy in R/r DLBCL, with manageable late toxicities. This patient's persistent B cell aplasia associated with CR from disease 16 months post-infusion suggests persistence of circulating CAR-T cells.

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