de parto, percentual de células mononucleares e CD34+ viáveis. **Discussão:** O sangue do cordão umbilical oferece vantagens únicas, muitas das quais são diretamente aplicáveis à alorreatividade dirigida pelas células NK. A imunoterapia baseada nas células NK derivadas de SCU tem se mostrado como um tratamento promissor, assim como o grande potencial para sua expansão *in vitro*. Alguns autores já demostraram que as células NK expandidas possuem alta atividade antitumoral tanto *in vitro* quanto *in vivo*. Além disso, SCUP contém populações de células que representam progenitores de células NK presentes em números muito pequenos no sangue periférico. O resultado da quantificação das células NK no SCUP confirma os achados anteriores. Sua concentração é uma variável independente e não correlacionada com a concentração das células CD 34+, tipo de parto ou idade gestacional. Um possível produto de terapia avançada produzido a partir de células NK derivado de SCUP, com potencial aplicação autóloga ou alogênica "pronto para uso"na imunoterapia celular anticâncer, é uma opção promissora. A quantificação destas células no SCU armazenado deve ser considerada como mais um dos controles de qualidade do material para um possível uso futuro em terapias avançadas.

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EFFICACY AND SAFETY OF CILTACABTAGENE AUTOLEUCEL (CILTA-CEL), A BCMA-DIRECTED CAR-T CELL THERAPY, IN PATIENTS WITH PROGRESSIVE MULTIPLE MYELOMA (MM) AFTER 1–3 PRIOR LINES OF THERAPY: CARTITUDE-2 PHASE 2 STUDY

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Objectives: Cilta-cel is a CAR-T cell therapy that expresses 2 BCMA-targeting single-domain antibodies, designed to confer avidity. In the multicohort, phase 2 CARTITUDE-2 study (NCT04133636), the safety and efficacy of cilta-cel in various clinical settings and suitability of outpatient administration was explored in patients with multiple myeloma. **Material and methods:** Patients enrolled in Cohort A had progressive MM after 1–3 prior lines of therapy (LOT), including a proteasome inhibitor (PI) and immunomodulatory drug (IMiD), were lenalidomide refractory, and were naïve to BCMA-targeting agents. A single cilta-cel infusion (target dose: 0.75×10^6 CAR+ viable T cells/kg) was given 5–7 days after start of lymphodepletion (daily cyclophosphamide [300 mg/m^2] and fludarabine [30 mg/m^2] for 3 days). The primary outcome was minimal residual disease (MRD) 10-5 negativity. Secondary outcomes were response rates (per IMWG criteria) and safety (per CTCAE; CRS and ICANS by ASTCT). **Results:** As of the February 2021 data cutoff (median follow-up: 5.8 months [2.5–9.8]), 20 patients (65% male; median age 60 years [38–75]) received cilta-cel; 1 patient was treated in an outpatient setting. Patients (n = 12: <3 prior LOT; n = 8: 3 prior LOT) received a median of 2 (1–3) prior LOT. All patients were exposed to PI, IMiD, and dexamethasone, 95% to alkylating agents, and 65% to daratumumab. The majority (95%) were refractory to the last LOT; 40% were triple-class refractory. Overall response rate was 95% (95% CI: 75–100), 75% (95% CI: 51–91) achieved stringent CR/CR, and 85% (95% CI: 62–97) achieved ≥VGPR. Median time to first response was 1.0 month (0.7–3.3); median time to best response was 1.9 month (0.9–5.1). Median duration of response was not reached. All patients (n = 4) with MRD-evaluable samples at 10-5 at data cutoff were MRD-negative. Hematologic AEs ≥20% were neutropenia (95%; grade 3/4: 90%), thrombocytopenia (80%; grade 3/4: 35%), anemia (65%; grade 3/4: 40%), lymphopenia (60%; grade 3/4: 55%), and leukopenia (55%; all grade 3/4). 85% of patients had CRS; 10% were grade 3/4. Median time to CRS onset was 7 days (5–9), with a median duration of 3.5 days (2–11). CAR-T cell neurotoxicity occurred in 20% of patients (all grade 1/2). Three patients had ICANS (n = 1: grade 1; n = 2: grade 2); median time to onset was 8 days (7–11) and median duration was 2 days (1–2). One patient had grade 2 facial paralysis; time to onset was 29 days with a duration of 51 days. One death occurred due to Covid-19 (assessed as treatment-related by investigator). The safety profile was manageable in the patient who was treated in an outpatient setting. **Discussion:** Updated efficacy and safety findings will inform suitability of outpatient treatment in this and other cohorts of CARTITUDE-2 as well as the CARTITUDE-4 study. **Conclusion:** A single cilta-cel infusion at the recommended phase 2 dose led to early and deep responses with a manageable safety profile in patients with MM who had 1–3 prior LOT.

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