anticorpos, o que pode resultar em imunodeficiência. Embora as RAs apresentadas tenham sido reincidentes e graves nos estudos avaliados, todas são manejáveis para garantir a segurança do paciente. Ademais, algumas RAs como náuseas, vômitos, diarreia e dor abdominal, embora observadas nos estudos com o tisagenlecleucel, apresentaram baixa incidência quando comparamos ao observado nos tratamentos convencionais como a quimioterapia e a radioterapia. **Conclusão:** As principais RAs reportadas nos estudos com tisagenlecleucel foram a SLC, neutropenia febril, anemia e hipogamaglobulinemia, sendo as duas primeiras consideradas mais graves. São necessários mais dados em grande escala sobre a segurança do tratamento para melhor quantificação, manejo e prevenção das RAs.

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GRANULOCYTE-COLONY STIMULATING FACTOR (G-CSF) ENHANCES THE MOBILIZATION OF BONE MARROW-DERIVED MESENCHYMAL STEM CELLS IN THE PERIPHERAL BLOOD OF BALB/C MICE

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Introduction: Mesenchymal stem cells (MSCs) have emerged in recent years as beneficial tools for cell therapy and autologous/allogeneic transplantation and their clinical harnessing considers the bone marrow (BM) and peripheral blood (PB). However, this requires a process of endogenous mobilization that offers a non-invasive alternative. Thus, granulocyte colony-stimulating factor (G-CSF) and AMD3100 (Plerixafor®) are well known and clinically approved to stimulate MSCs mobilization, but data on their potential activity in MSCs mobilization are still scarce. **Objective:** Evaluate the influence of G-CSF and AMD3100 stimulation on MSCs mobilization from BM to PB in BALB/c mice. **Material and methods:** For this study, 45 male BALB/c mice aged 3-4 weeks were used. They were divided into 5 groups: PBS+PBS control group (CG, n = 9), PBS +GCSF group (n = 9), PBS+AMD3100 group (n = 9), G-CSF+PBS group (n = 9) and G-CSF+AMD3100 group (n = 9). Pre-treatment was performed with intraperitoneal (i.p.) injections of phosphate-buffered saline (PBS, 160 μl/i.p.) or G-CSF (200 μg/kg/i.p.) for 4 consecutive days. On day 5 (D5), 24 hours after the last injection of PBS or G-CSF, mice were also injected with PBS or AMD3100 (5 mg/kg/i.p.). After 1 hour, BM and PB samples were subsequently collected. The mobilized CD14+CD73 +CD90+CD105+ MSCs were then evaluated *ex vivo* using Flow Cytometry. Statistical analyzes were performed through GraphPad Prism (v.5) using One-way ANOVA test with Tukey's post-test. **Results and discussion:** Based on this study, it was found that there were no statistically significant differences for MSCs mobilization in the BM in any of the studied groups; however, the PBS+AMD3100 group had the highest rate of MSCs enrichment within the BM. Notably, mice of the G-CSF+PBS group exhibited the highest rate of MSCs mobilization in the PB when compared to the CG ($p < 0.0001$), while the G-CSF+AMD3100 group showed no statistically significant difference for MSCs mobilization in PB. Furthermore, the mice of the PBS+G-CSF group and the PBS +AMD3100 group did not exhibit a significant increase in MSCs mobilization in the PB. **Conclusion:** With these results, it is verified that the pre-treatment with G-CSF is the most suitable to induce the MSCs mobilization to PB in a dose-dependent manner. Our data demonstrated that AMD3100 proved not to be suitable for MSCs mobilization in both BM and PB. **Funding:** FAPEAM, CAPES and CNPq.

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THE EFFECT OF GRANULOCYTE COLONY-STIMULATING FACTOR (G-CSF) ADMINISTRATION ON CYTOKINE PRODUCTION BY BONE MARROW AND PERIPHERAL BLOOD DERIVED STEM CELLS IN PRIMARY CULTURE

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Introduction: Granulocyte colony-stimulating factor (G-CSF) is a growth factor that plays an essential role in the modulation of hematopoiesis through direct effects on proliferation, survival, and mobilization of bone marrow (BM) and peripheral blood (PB) derived stem cells (SCs). **Objective:** Evaluate the influence of G-CSF administration on cytokine production by SCs derived from BM and PB in primary culture. **Material and methods:** SCs were isolated from BM and PB from 27 BALB/c mice pre-treated for 4 consecutive days with intraperitoneal (i.p.) injections of phosphate-buffered saline (PBS) solution (160 μl/i.p.) or G-CSF (200 μg/kg) at 24-hours intervals. On day 5 (D5), mice were also injected with PBS or G-CSF again. SCs were obtained through BM mononuclear cell isolation by Ficoll-Hypaque™gradient and then stimulated or not with G-CSF in cell culture. Cytokines in the supernatant were