POST-TRANSPLANT LYMPHOPROLIFERATIVE DISORDER AFTER AUTOLOGOUS PERIPHERAL STEM CELL TRANSPLANTATION IN A ADULT PATIENT: CASE REPORT

FZ Piazera [a], JVP Neto [b], LHA Ramos [b], RS Vasconcelos [b]

[a] *Universidade de Brasília (UnB), Brasília, DF, Brazil*
[b] *CETTRO – Centro de Tratamento Oncologico, Oncoclínicas, Brasília, DF, Brazil*

Introduction: Post-Transplant Lymphoproliferative Disorder (PTLD) is a complication of allogeneic Bone Marrow Transplantation (BMT). Rare cases of PTLD after autologous BMT have been reported only in adults. This case report described PTLD in a patient after autologous Peripheral Stem Cell Transplantation (PSCT), and this condition is rare in patients who do not have HIV and are late after transplantation. **Materials:** We report a case of EBV lymphoproliferative disease 2-years after autologous transplantation for Diffuse Large B-Cell Lymphoma germinal center subtype. **Results:** This 66-year-old male with stage IVB Lymphoma Diffuse Large Cell B underwent autologous PSCT post first relapse. On day 650 post PSCT, patient started with night sweats, afternoon fever, asthenia and increased abdominal volume. On physical examination, no lympfondomegaly was found, but a voluminous splenomegaly was identified with 10 cm below the left costal margin. Opportunistic infections research was conducted: negative CMV PCR, Leishmaniose negative, Chagas negative, IGRA para Tuberculose negative, Toxoplasmose Negativo, HIV, HTLV, Hepatite B e C negative, HHV6 negative. PCR polymerase was conducted on whole blood EBV DNA, and DNA levels increased up to 2.11×10^3 copies/mL. Laboratory studies have shown normal levels of IgG, IgA, IgM. The bone marrow biopsy immunohistochemical analysis showed that the lymphocytes were positive for CD20, according to the immunophenotype below: Flow cytometric immunophenotyping analysis of the specimen revealed that the proportion of surface: 86.58% of the B lymphocytes (1.66% of the total cells analyzed) expressed CD19, CD20 (strong), CD23 (weak), CD45 (strong), CD79b, CD81 and lambda light chain restriction, without expression of CD10, CD38, CD43, CD200, CD305 or other markers investigated. 0.12% were plasma cells without immunophenotypic alterations (ckappa/clambda: 1.47). The patient presented a probable clinical presentation of EBV lymphoproliferative disease after autologous transplantation-mononucleosis like, the patient was treated with weekly rituximab and monitoring of EBV levels, with complete negative viral load and complete remission of the condition after 4 doses of rituximab. Monthly PCR monitoring for EBV with an undetectable viral load was performed after 6-months of evolution. **Conclusion:** New approaches for diagnosis and monitoring based on quantitative polymerase chain reaction for EBV DNA are being explored. What exactly is being measured (the source and character of the viral DNA) has yet to be determined, as well as the compartment that should be analyzed (whole blood, serum, plasma, or lymphocytes). Despite these issues, there is an emerging consensus that these technologies will facilitate rapid diagnosis and therapeutic monitoring in the future. A myriad of therapeutic interventions are or will be available. Rituximab, alone or in addition to other therapies, promises a profound change in the landscape with respect to the treatment and perhaps prevention of post-transplant lymphoproliferative disease.

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UNRELATED PEDIATRIC UMBILICAL CORD BLOOD TRANSPLANTATION

OMWO Félix [a], AS Ramos [a], ACL Alves [a], MRA Gomes [a], G Zamperlini [a], MF Cardoso [a], LL Quintino [a], VC Ginani [a,b], RV Gouveia [a,b], A Seber [a,b]

[a] *Hospital GRAACC Instituto de Oncologia Pediatrica da Universidade Federal de São Paulo (UNIFESP), São Paulo, SP, Brazil*
[b] *Hospital Samaritano Higienópolis, São Paulo, SP, Brazil*

Unrelated umbilical and placental cord blood (UCB) is an effective source of hematopoietic stem cells, replacing bone marrow or peripheral blood stem cells when there is no related donor or matched unrelated adult available. To improve engraftment of these units with very low cellularity, the New York Cord Blood Bank (NYBC) has developed a method of thawing with slow dilution and washing of the cells based on *in vitro* data (Rubinstein, 1995), to reduce the osmotic damage caused by the density gradient at the time of infusion if cells are infused with no manipulation. Objective: This study is to report a two decade the experience using UCB as a source for hematopoietic reconstruction. Methods: Data was collected from the Cell Processing forms. The UCB units were received from national and international cord blood banks. The Dimethylsulfoxide (DMSO) removal was performed according to Rubinstein's protocol: after almost complete thawing in a water bath at 37°C, a cold (4°C) 5% dextran-albumin solution was slowly added to the bag in a 1:1 ratio on an icy surface, with continuous manual homogenization. An aliquot was removed for quality control and the cells were transferred to another bag and centrifuged at 400g 4°C for 20 min. The supernatant was transferred to a new bag and the buffy coat was resuspended in the same dextran-albumin solution and sent for infusion with a simple tubing. The supernatant was recentrifuged and infused until $< 10^7$ cells/kg remained. Results: Between Jun, 2000 to Sept, 2020 we received 47 UCB units, 34 of them from international banks (17 from the NYBC) and the others from two national banks. We performed 40 transplants in 37 patients with benign and malignant hematological diseases. Seven patients received a double UCB graft. The median age was 6-years (range: 1–18), weight 18 kg (7–68), and 25 patients were male. The median cellularity infused was after thawing and washing was 4.6×10^7/kg (1.7–17.2). The median time of engraftment was 10-days (range: 6–59) and 47% of the patients are alive. Six patients died without engraftment. An additional patient had his autologous UCB infused after a private bank collection and did not have hematopoietic reconstitution. Conclusion: The infusion of UCB is feasible when there are no other