EPSTEIN-BARR VIRAL LOAD MONITORING BY QUANTITATIVE PCR DURING TREATMENT OF A CHILD WITH POST-TRANSPLANT LYMPHOPROLIFERATIVE DISEASE

Machado, A.S.C [1] , Coelho, A.M. [1], Resende L.M.M.[2] **,** Amoêdo N.D [3]. , Rumjanek, F.D. [3], Klumb, C.E.[1]

[1] Serviço de Hematologia; HC-I, Instituto Nacional do Câncer; [2] Divisão de Patologia, Instituto Nacional do Câncer; [3] Departamento de Bioquímica Médica, Universidade Federal do Rio de Janeiro

INTRODUCTION: Transplant patients are particularly at risk of developing B pos-transplant lymphoproliferative disease (PTPD) because of the intensive immunosuppressive regimens to prevent graft rejection. Epstein-Barr virus (EBV) is causatively linked to PTLD and in pediatric transplantation, PTLD is associated to a rapid rise of viral loads in peripheral blood mononuclear cells (PBMCs). Recent studies have shown that EBV viral load is more effectively cleared in plasma compared to PBMCs during remission of PTLD. **OBJECTIVES:** To quantify serially plasma EBV viral load by quantitative PCR during treatment of a 13 years-old child who developed PTLD after renal transplantation to test whether this approach might be valuable to predict treatment response. **RESULTS:** EBV viral plasma load was monitored during 6 time points from diagnosis to the end of treatment. A Real-time quantitative system (Q-PCR) was developed for EBV DNA detection toward the EBNA-1 region. At diagnosis the viral load was 343,650 copies/ml and was undetectable in five time points after the onset of the treatment, including 6 months from its end. **CONCLUSION:** The quantitative approach adopted will allow us to correlate the levels of plasma cell-free DNA with treatment response for identifying resistant disease and predicting early relapse.