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Reactivation of human Herpesvirus (EBV, CMV, HHV-6 and HHV-7) in allogeneic hematopoietic stem cell transplant (allo-HSCT) recipients. Detection and monitoring using antigenemia, Nested-PCR (N-PCR) and real-time quantitative PCR (qPCR)

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CMV is one of the most critical viral causes of complications among hematopoietic stem cell transplant (HSCT) recipients. HHV-6 shares many characteristics with CMV and can be reactivated both by immunostimulation and immunosuppression like Epstein-Barr virus (EBV). HHV-7 is closely related to HHV-6 and infects most people early in childhood. EBV-induced lymphoproliferative disease is frequent in T-lymphocyte-depleted HSCT. aGVHD is associated with seropositivity for different herpesviruses but the real role of these viruses in the progression of aGVHD has not been clarified. In this prospective cohort, blood samples were collected from HSCT patients weekly for 150 days post transplantation. Antigenemia and N-PCR for CMV was used for detect active CMV infection. N-PCR for detect active HHV-6 and HHV-7 infections. Real-time quantitative PCR (qPCR) was used for active EBV infection. Active CMV infection occurred in 72% of the patients in a median of 65 days post transplant. Active HHV-6 infection was detected in 30.5% patients in a median of 68 days after transplant. Active HHV-7 infection was detected in serum in 13.9% in a median of 47 days. Twenty-two patients had aGVHD (51%). Fifteen of these patients had active CMV infection; four had active HHV-6. Three patients with aGVHD had active HHV-7. EBV was detected in 47.2% patients at 42 days post transplant. Co-infection EBV+CMV occurred in 62.8% patients in a median of 43 days post transplant. No patient presented EBV-LPD, but in 7 patients, CMV disease in TGI occurred. Serious CMV infections in HSCT recipients are the result not only the pathogenic properties of CMV but the additive replication of other herpesviruses.

Biography

Sandra H. A. Bonon is biologist, chief of Laboratory of Diagnosis of Infectious Diseases by Molecular Biology Techniques, Department of Clinical Medicine/Faculty of Medical Sciences/State University of Campinas and has completed his Ph.D in this University in 2004. Actually, is participant professor of Clinical Medicine/Post Graduation course and participant of JICA`s project (Brazil/Japan), International Collaborative project "New technologies approaches applied for the improvement of diagnosis and management of fungal infection in AIDS and immunocompromised patients in Brazil".