

Infectious complications are very common after haematopoietic stem cell transplantation (HSCT). Beside bacterial and mycotic infections, viral infections are important cause of morbidity and mortality of these patients. Among viral infections, the most common are infections caused by DNA viruses. Between January 2001 and October 2008, we have tested samples from 217 paediatric and 382 adult patients after HSCT. In total, we have tested 15 757 samples (median 31 samples for children, 20 for adult). Among them, there was 14 867 samples of peripheral blood and 890 samples of other biological materials (urine, stool, CSF etc.). Quantity of HSV, VZV, CMV, HHV-6, HHV-7, EBV, adenoviruses of group A-C, BKV and albumin gene was tested using quantitative real-time PCR technology. Results of CMV, HHV-6, HHV-7 and EBV were normalized to 10 000 human genome equivalents. HSV and VZV were detected in minute number of samples. Threshold for virostatic therapy was assessed to 100 normalized viral copies for CMV. This level was crossed in 55 children and 123 adults. Despite the virostatic treatment, symptoms of CMV infections developed in 68 patients. CMV disease, alone or in the consequence of other post-transplant complications, was observed in 20 patients, fatal in 17 of them. In 4 paediatric patients, we have detected the presence of ganciclovir resistant CMV, which led us to modification of virostatic therapy. CMV reactivation was successfully treated in 89% patients. In none patient, we have observed complications attributable to HHV-6 or HHV-7. We have also described chromosomal integration of HHV-6 genome in several patients without any complications caused by this situation. EBV associated lymphoproliferative disease was prospectively detected in 7 patients. Disease was successfully treated in all but one patient. Adenoviruses were detected in 35 patients. BKV was detected in 72 patients.