

Abstract

Respiratory tract diseases are of the most common infectious diseases among both children and adult population all over the world. Viruses are the most frequent cause of respiratory diseases. In healthy immunocompetent individuals respiratory infection proceeds mostly without major complications. Immunocompromised hosts, for example patients after transplantation, are more susceptible to infection and even common infection may be life threatening for them. Human polyomaviruses KI (KIPyV) and WU (WUPyV) and human bocavirus (HBoV) are most frequently detected in the respiratory tract of patients with acute respiratory tract infection primarily in children and in immunosuppressed patients. However, clear causative link between presence of these viruses and the respiratory disease has not been established. In this retrospective study were tested by quantitative real-time PCR 822 (745 from adults and 77 from children) respiratory samples from 380 immunocompromised patients included 326 adults and 54 children. Viruses were also detected in the 84 peripheral blood samples. The most frequently detected virus was HBoV (6,32 % positive patients), followed by KIPyV (5,79 % positive patients) and WUPyV (0,53 % positive patients). Only HBoV was detected in blood samples. The study confirmed the presence of KI and WU polyomaviruses and human bocavirus in the pediatric and adult immunosuppressed Czech population.

Key words:

respiratory virus, human bocavirus, HBoV, human polyomavirus KI, KIPyV, human polyomavirus WU, WUPyV, herpesvirus, transplant, immunocompromised host