

# HHV-6 and HHV-7 infections

HHV-6 and HHV-7 are members of the Herpesviridae family. HHV-6 has two subspecies - HHV-6A and HHV-6B. They are enveloped viruses that contain double-stranded DNA. The size of the virion is 120-150 nm. They replicate in the nucleus and mature in the cytoplasm. They are lymphotropic viruses similar to CMV and they persist in the body for life.

## Diagnosis

- Based on clinical signs
- serology – IgG and IgM antibodies determined by immunofluorescence or ELISA methods
- cultivation – demanding, on special lymphocyte agars
- PCR – from different tissues, the most sensitive method



Sixth disease

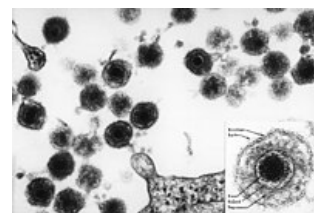
## Manifestation of an infection

Primary infection usually happens during childhood, often without symptoms. **HHV-6** causes one of the most well-known manifestations of these viruses - a minor **febrile condition in infants and young children** with a rash - exanthema subitum (sixth disease), or without skin manifestations. The severity increases with the occurrence of **febrile convulsions**. **HHV-7** infection also has similar symptoms. The infection spreads through the air (respiratory droplets). After an incubation period of 5-12 days, the patient has a high fever **without catarrhal manifestations** that lasts for about 3 days, which is typical for the disease. At the time of the temperature drop, there is a small rash, which must be distinguished from a toxoallergic rash (which is caused by ATB, that are often administered because of the suspicion of a bacterial etiology).

Rare clinical manifestations include **encephalitis, hepatitis or infectious mononucleosis**.<sup>[1]</sup>

In immunosuppressed patients (lymphoproliferative diseases, after transplants...) there is a possibility of reactivation of the infection.

HHV-6A is more neurotropic, often detectable in patients with infectious CNS disease (multiple sclerosis).



HHV-6 in an electron microscope

## Therapy

Therapy is symptomatic

## References

### Sources

- ŽAMPACHOVÁ, Eva. *Přednášky a materiály dr. Žampachové ke stažení* [online]. [cit. 2012-04-19]. <->.

### References

1. Dostál, V. et al.: Infektologie. Karolinum, Praha, 2004, str. 247

### Literature

- DOSTÁL, V, et al. *Infektologie*. 1. edition. Praha : Karolinum, 2004. 338 pp. pp. 247. ISBN 80-246-0749-2.
- Human herpesvirus 6