

CLINICAL AND IMMUNOLOGICAL FEATURES OF THE COURSE OF HERPESVIRAL DISEASES IN HIV INFECTION IN CHILDREN

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Relevance

Activation of herpesvirus infection in HIV-infected patients, in addition to a general increase in HIV replication, occurs with increased release of HIV virions in areas of herpetic skin rashes, which do not always have the appearance characteristic of herpes. The most important thing is that in this case particles of a mixed phenotype can be formed – HIV virions, “dressed” in the herpes shell. Such “camouflaged” particles, unlike ordinary HIV virions, are capable of infecting various types of cells, including epithelial cells and fibroblasts, thereby giving a productive HIV infection, that is, it becomes possible to become infected with HIV through contact with the skin and mucous membrane.

The purpose of the research

The purpose of our study was to study the clinical and immunological features of the course of herpes virus infections in children with HIV infection

Research materials

The study was conducted on the basis of a specialized clinic for infectious diseases at the Republican AIDS Center; all hospitalized children were examined for herpesvirus infections using the ELISA method in the first days after hospitalization. The content of various groups of lymphocytes was determined by flow cytometry (Ortumspectrum) using monoclonal antibodies against CD.

Research results

Analysis of the frequency distribution of nosological forms of herpesvirus infections with clinical and laboratory manifestation in patients with HIV infection showed that most often the data diseases worsened in clinically pronounced stages of HIV infection when the level of CD4+ lymphocytes was less than 200 per 1 μ l. The most common exacerbations of infection caused by the herpes simplex virus type 1 (88.5%) and herpes zoster (86.5%). According to the results of polymerase chain reaction, other viruses of this group were found in 96% of patients with herpes simplex virus in various environments. In half of the cases, a mixed infection was detected – three viruses: herpes simplex virus, EBV, and herpes virus type 6. Mixed infection with two pathogens was also quite often recorded: herpes simplex virus and EBV, herpes simplex virus, and herpes virus type 6 (22 and 15% of cases, respectively). EBV was most often detected (in 61.5% of cases, mainly in epithelial cells of the oropharynx, less often in saliva and peripheral blood lymphocytes) and herpes virus type 6 – in 58.2% of cases. CMV



was detected only in 27% of cases in epithelial cells of the cervical canal, urethra and peripheral blood lymphocytes. It should be noted that in 9.1% of patients, DNA of the herpes simplex virus types 1 and 2 was detected in several samples; in particular, with anogenital rashes, it was detected in the epithelial cells of the oropharynx and peripheral blood lymphocytes.

Conclusion

Changes in the immune system increased as HIV infection progressed due to the addition or activation of opportunistic diseases. Severe forms of herpesvirus infections were observed in patients with a CD4+ lymphocyte level of less than 200 in 1 µl of blood, and in 25% of cases the pathological process became generalized. More than half of patients with HIV infection with a low level of CD4+ lymphocytes had a combination of herpes simplex with other opportunistic infections (tuberculosis, toxoplasmosis, etc.).

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