

Mycoses in the Structure of Opportunist of Middle Ear Infections in Hiv-Infected Children

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The problem of infection caused by the human immunodeficiency virus (HIV) has been studied in otorhinolaryngology since the early 1990s. Identified and described diseases that are an indicator of acquired immunodeficiency syndrome (AIDS), studied the symptoms of ear, throat and nose lesions in HIV-infected and AIDS patients [1.3.5.7]. Due to a significant increase in the number of cases of HIV infection, the likelihood of contact between an otorhinolaryngologist and HIV-infected patients increases. With HIV infection, various manifestations of the disease often occur with damage to the upper respiratory tract. Otorhinolaryngologists, as well as other specialists, already have to take an active part in the diagnosis, treatment of HIV-infected persons, preventive work, which, of course, will require knowledge of the features of the pathology of the ear, throat and nose in HIV infection /AIDS [2.4.6.8].

In HIV-infected children, fungal infections caused by *Candida* spp. and *Cryptococcus* spp. are much more common than in non-infected individuals. Due to the fact that HIV infection is characterized by severe disorders in the immune system of patients, the latter are easily infected with aspergillus, penicillium, mucor and other fungi.

It is known that there is a direct relationship between the state of the immune system and the activation of non-pathogenic flora and opportunistic infection (microflora) of the middle ear. With HIV infection already in the early stages of the disease, even before the development of a picture of severe immunodeficiency, the first signs of immunosuppression appear - this is recurrent candidiasis of the middle ear [9.10.11.12.13].

The purpose of the study was to study the frequency and clinical features of candidal lesions of the middle ear in children with HIV/AIDS, depending on the stage of the infectious process.

Materials and methods of research

The study included 38 patients, out of 27 boys (61.4%), 11 girls (38.6%), who were hospitalized in the ENT department of the Bukhara Regional Children's Multidisciplinary Hospital. The diagnosis of HIV infection was established by the result of ELISA and immunoblotting. The stages of HIV infection were determined according to the WHO clinical classification of HIV-AIDS in children (2007). 18 children were examined with stage 3 HIV infection, and 20 with stage 4. The comparison group included 20 practically healthy children. All examined patients underwent a microbiological study of pus from the external auditory canal with inoculation on Sabouraud's medium.

Results and discussion

An analysis of the complaints of the examined persons with mycotic lesions of the middle ear showed that most often they had symptoms such as pain, burning and discharge from the external auditory canal.

Candidal lesions of the mucous membrane of the middle ear were distributed as follows: candidal myringitis was detected in 38.9% of cases, candidal exudative otitis - 9.3% of cases in children with

4 clinical stages of the disease. In children with clinical stage 3, candidal lesions of the external auditory canal were recorded in 4.8% of cases. Candidiasis of the external auditory canal had a protracted and recurrent nature of the course, most often observed in the form of pseudomembranous and erythematous (or atrophic) forms: patchy or confluent areas of hyperemia appeared on the walls of the external auditory canal. Cheesy plaques were formed on the hyperemic area of the external auditory canal. When they were removed, a hyperemic, sometimes bleeding wound was exposed.

It should be noted that in the 3rd and 4th clinical stages of HIV infection in children, the inoculation of yeast-like fungi significantly increased compared to that in immunocompetent individuals. So, the number of mushrooms r. *Candida* in 1 ml of pus in HIV-infected children in the 3rd stage of the disease was 5.60 ± 0.5 CFU / ml, and in patients in the 4th stage this figure was 6.30 ± 0.7 CFU / ml, while in healthy children, the sowing of fungi. *Candida* was registered at the level of 2.15 ± 0.1 CFU / ml. All patients underwent fungicidal therapy and treatment, which, as a rule, were highly effective.

The data of our studies confirm the fact that candidal lesions of the mucous membrane of the middle ear manifest in severe immunodeficiency, namely, they are more common in the 4th clinical stage of HIV infection. Fungal lesion of the middle ear is a marker of the terminal stage of HIV infection - the stage of AIDS. Timely diagnosis and rational antifungal therapy can avoid complications and improve the quality of life of patients with HIV infection.

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