

HISTORY OF THE DEVELOPMENT OF HIV-RELATED DISEASES

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Abstract. Currently infected with the immunodeficiency virus is a global problem for humanity. This issue affects all countries, without exception, indicating an ongoing AIDS pandemic. Despite the achievements of modern medicine, this disease is not subject to lives treatment, an infected person cannot fully recover, due to that the main way to counteract HIV infection is prevention, therefore, in this article we will highlight the main theories of the origin of the disease treatment, its symptoms and transmission routes, as well as the main preventive rules to avoid infection. abstract. The immunodeficiency virus infection is now a global problem for humanity. This problem affects all countries, without exception, indicating an ongoing AIDS pandemic. Despite the achievements of modern medicine, the disease cannot be cured, an infected person cannot be cured and return to normal life, so the main way to combat HIV infection is prevention, so in this article we will highlight the basic theory of the disease, its symptoms and ways of transmission, as well as basic prevention rules to avoid getting infected.

Keywords: HIV, AIDS, virus, immunosorbent assay.

Аннотация. В настоящее время заражение вирусом иммунодефицита является глобальной проблемой для человечества. Эта проблема затрагивает все страны без исключения, что свидетельствует о продолжающейся пандемии СПИДа. Несмотря на достижения современной медицины, это заболевание не подлежит пожизненному лечению, инфицированный человек не может полностью выздороветь, в связи с чем основным способом противодействия ВИЧ-инфекции является профилактика, поэтому в данной статье мы выделим основные теории возникновения заболевания, его симптомов и путей передачи, а также основных профилактических

правил во избежание заражения. Аннотация. Инфекция вируса иммунодефицита в настоящее время является глобальной проблемой для человечества. Эта проблема затрагивает все страны без исключения, что свидетельствует о продолжающейся пандемии СПИДа. Несмотря на достижения современной медицины, болезнь неизлечима, инфицированный человек не может вылечиться и вернуться к нормальной жизни, поэтому основным способом борьбы с ВИЧ-инфекцией является профилактика, поэтому в данной статье мы осветим основные теории болезни, его симптомы и пути передачи, а также основные правила профилактики, чтобы не заразиться.

Ключевые слова: ВИЧ, СПИД, вирус, иммуноферментный анализ.

Annotatsiya. Hozirgi vaqtda immunitet tanqisligi virusi bilan kasallanish insoniyat uchun global muammodir. Bu muammo barcha mamlakatlarga taalluqlidir, istisnosiz, davom etayotgan OITS pandemiyasidan dalolat beradi. Zamonaviy tibbiyotning yutuqlariga qaramay, bu kasallik umrbod davolanmaydi, infeksiyalangan odam to'liq tuzalmaydi, chunki OIV infeksiyasiga qarshi kurashning asosiy usuli profilaktikadir, shuning uchun biz ushbu maqolada kelib chiqishining asosiy nazariyalarini ta'kidlaymiz. kasallikni davolash, uning belgilari va yuqish yo'llari, shuningdek infeksiyani oldini olishning asosiy profilaktik qoidalari. mavhum. Immunitet tanqisligi virusi infeksiyasi bugungi kunda insoniyat uchun global muammodir. Bu muammo barcha mamlakatlarga taalluqlidir, istisnosiz, davom etayotgan OITS pandemiyasidan dalolat beradi. Zamonaviy tibbiyotning yutuqlariga qaramay, kasallikni davolab bo'lmaydi, yuqtirgan odamni davolash va normal hayotga qaytishi mumkin emas, shuning uchun OIV infeksiyasiga qarshi kurashning asosiy usuli profilaktikadir, shuning uchun ushbu maqolada biz kasallikning asosiy nazariyasini ta'kidlaymiz, uning belgilari va yuqish yo'llari, shuningdek infeksiyani yuqtirmaslik uchun asosiy profilaktika qoidalari.

Kalit so'zlar: OIV, OITS, virus, immunosorbent tahlil.

Infectious diseases have accompanied mankind since ancient times, Hippocrates wrote about outbreaks of contagious diseases. First documented the plague of Athens that hit Greece is considered to be a confirmed epidemic in the 5th century BC, and the first pandemic of the Justinian plague, which began in 531 on territories of modern Syria and Egypt. Covering the entire Roman Empire, it lasted about 200 years, during which time almost half of the population died empire. In the XXI century, thanks to the achievements of medicine and the development of science in general doctors and scientists managed to stop most of the dangerous infections, but even at present, with the availability of vaccines, sera, modern anti- bacterial preparations, the world's population continues to face epidemics. In its history, mankind has experienced three plague pandemics, seven cholera pandemics, several outbreaks of mass infection with typhus typhus, smallpox, influenza. We live in a world where in the active phase remain pandemics of HIV infection, tuberculosis, coronavirus. More than 40 years have passed since the emergence of HIV infection, however, until now Since then, the disease remains an urgent problem, causing a high morbidity and mortality in different countries. As of June 2021 24.5 million people worldwide received antiretroviral treatment viral therapy. The total number of HIV-infected people registered in Russian Federation until November 1, 2012, amounted to 703,780 people, and 12/31/2012 already more than 1.5 million people and their number only continues increase [1]. June 5, 1981 is considered the start date of the HIV/AIDS epidemic; on this day in The New England Journal of Medicine published an article by Michael Gottlieb and 22 co-authors, dedicated to the description of clinical cases of a previously unknown doctors of acquired immunodeficiency syndrome in adult patients [2].

In the USSR, the first patient with HIV/AIDS appeared in 1982, which he contracted in Tanzania during a long business trip. Upon returning to Moscow in August 1982, the man ended up in an infectious disease

hospital in Moscow with fever, diarrhea, skin rash - later, through several years, when data on a new disease accumulate, it will become clear that this there were manifestations of the so-called. acute HIV infection. After treatment in clinics in Moscow and discharge from the hospital, he went to his hometown in the Krasnodar Territory. Total for chain that began with the first patient from 1984 to 1996, 25 a person (through sexual contact, blood transfusion, parenterally in a hospital, two children from infected mothers). Currently, according to Rosstat, there are a number of theories and hypotheses

origin of the HIV virus. AIDS virus (HIV) belongs to the genus Lentivirus (literal translation - "slow virus").

This genus name is quite understandable, since from the moment of infection to the appearance of significant immunity disorders takes quite a long time body time. Other viruses of the genus Lentivirus infect sheep, cats, cows and horses. Of all the other viruses, the closest to HIV is SIV (Simian Immunodeficiency Virus that infects monkeys. Age SIV, according to scientists - 32,000 years.

Scientists believe that the HIV virus was transmitted from monkeys to humans through the blood around 1926, due to a bite or butchering of a carcass killed by a hunter monkey. The virus, having entered the human body, mutated into a strain that causes acquired immunodeficiency syndrome. The world's first death from AIDS is believed to have been recorded in 1959 in the Congo. Subsequent investigations by medical specialists, analyzed lysing the course of the disease, showed the very first cases of AIDS among prostitutes were registered in the United States in 1969. At that time, doctors

did not pay due attention to this and diagnosed "a rare form of 23 pneumonia." In 1978, the symptoms of the same disease, unknown to science, were

found in gay men in the US and Sweden, and also in heterosexual men in Tanzania and Haiti [3].

Only in 1981 by the Centers for Disease Control and Prevention (CDC) a new disease has been officially registered. He was found at young gay men in Los Angeles and New York. Because most of the patients were homosexual, the new disease called Gay Related Immuno Deficiency (GRID) or Gay Cancer, which translates stands for "Homosexual Cancer". At that time, doctors knew only congenital forms of immunodeficiency and the cause of the new diseases, so the main risk groups were patients with hemophilia, Haitians, drug addicts and homosexuals [4].

As a result of careful analysis, American researchers found the existence of a previously unknown syndrome, which in 1982 was named acquired immunodeficiency syndrome (AIDS). After few years HIV has been found to be transmitted through body fluids: blood, semen, breast milk. In the same year, the first HIV test was developed, then donated blood in the United States and Japan began to be tested for HIV. And two years later The World Health Organization approved the name of the pathogen AIDS: "Human Immunodeficiency Virus" (HIV). It also created the World major WHO program on AIDS, and the World Health Assembly adopted global AIDS strategy. In the same year in many countries the first antiviral drug azidothymidine or zidovudine appeared [5].

It is important to note that HIV and AIDS are not synonymous. AIDS is a broader concept meaning immunodeficiency. It may arise from different causes: debilitating chronic diseases, exposure to radiation, in children with impaired immune systems and elderly patients with immune damage. The term AIDS is currently used only to designate one phase of HIV infection - the phase of manifestation. 24

If we talk about the ways of spreading HIV infection, then it is worth consider the main ways of transmission of the disease, of which there are only three:

1. Parenteral (through the blood) - infection occurs when administered infected drugs, using non-sterile needles and syringes, through uncontaminated reusable instruments used for manicure/pedicure, tattoos or piercings.

2. Sexual transmission occurs through unprotected sex. contact with an HIV-infected person. The presence of infectious diseases through sexual contact increases the risk of contracting HIV tenfold [6].

3. Vertical or intrauterine route - the virus is transmitted from infected mother to child during pregnancy, childbirth or breastfeeding feeding.

Considering HIV infection, it is impossible not to note the symptoms of this disease, which, however, is practically not expressed in specific symptoms max for a long time, so the diagnosis of HIV infection is made based on laboratory data. Approximately 90-95% of patients have antibodies to HIV appears within the first 3 months after infection, in the remaining 5- 9% - after 6 months and only 0.5-1% after one year.

The first 4-6 weeks after HIV infection is the “seronegative window”, when antibodies to HIV are not detected. Negative test result for HIV during this period does not mean that there is no HIV infection and that a person cannot infect others. Based on this, the disease can be suspected after one, three or six months after infection [7].

Enzyme linked immunosorbent assay (ELISA) that detects antibodies to HIV in the blood is a screening method. For confirmation specificity of the ELISA result, an immunoblotting reaction (IB) is performed,

the principle of which is to detect antibodies against various viruses ny proteins. Before receiving a positive IB result and with a negative as a result, the person is considered healthy, and no measures to combat the disease not undertaken.

For the prediction and assessment of the severity of HIV infection, it is of great importance polymerase chain reaction (PCR) to determine viral load, i.e. the

number of copies of HIV RNA in plasma. Difficulty in identifying HIV infection, in particular, is reflected in the specifics of the treatment of this disease. We emphasize that at present there is no way to prevent HIV infection or cure it completely. Antiretrovirals are now available Russian drugs that can slow or stop the progression HIV infections. Antiretroviral therapy is an integral and important part of complex treatment of HIV infection, which also includes treatment and prevention of opportunistic infections, pathogenetic treatment, immunocorrection, symptom control, general supportive care and psychosocial help. The goal of antiretroviral therapy in HIV-infected patients is the maximum long-term suppression of the viral replication, restoration and/or maintenance of immune system function, reduction of complications, improvement and prolongation of the quality of life, reduction morbidity and mortality associated with AIDS. Since HIV suppresses immune system, it is important to maintain the health of HIV-infected people with using non-pharmacological measures (proper and balanced nutrition, healthy sleep, avoidance of stress, overheating and hypothermia, healthy lifestyle) and regular follow-up with AIDS specialists [8].

Thanks to therapy, the life of a patient with HIV infection can be extended by several decades. But it is also necessary to note the other side this process. By increasing life expectancy, it increases the risk of spreading the virus, and not by the classical ways of spread:

1. Dairy - infection of the child through breast milk.
2. Professional and household - infection through damaged skin integuments and mucous membranes.
3. Perinatal - infection of a child from an infected mother during time of passage through the birth canal. Due to the severity and impossibility of a complete cure for this disease, it is worth distinguishing a number of specific methods of HIV/AIDS prevention, which could be applied worldwide:

1. Use only your personal hygiene items (toothbrushes, razors, blades, manicure tools, etc.).
2. Require the use of sterile instruments in various institutions niyah and organizations. Cosmetic procedures (tattoos, piercings, manicures, pedicure, etc.) to be carried out only in authorized institutions.
3. Use condoms for casual sex.
4. Teach yourself and your partner how to use condoms - this will help reduce the likelihood of contracting AIDS and protect against sexually transmitted diseases and unwanted pregnancy changes.
5. Avoid drug use, in particular injecting use.

To date, the Russian Federation, there are about 1.5 million people infected with affected by HIV infection. At the same time, in 2021, more than 71 thousand new cases of HIV infection, which is 1.4% less than a year earlier, but published by the Central Research Institute epidemiology, do not include cases of anonymous testing and infection foreign citizens. According to statistics from the Central Research Institute of Epidemiology, almost 68% of new cases account for heterosexual contacts. However, only 3% of those infected with HIV in 2021 reported homosexual relationships. Decreased

cases of infection through the use of intravenous drugs, if at the beginning of the epidemic, drug users accounted for nearly 57% in 2021. the indicator decreased to 27.8% [9].

Over the past year, 34,093 deaths have been reported. infected with HIV Russians, which is 5.9% more than in 2020 (32,208 people). Since HIV the infection is incurable and the number of new cases is exceeds the number of deaths, the total number of Russians living with HIV, researchers note [10].

A number of disadvantaged regions stand out, where a very high incidence prevalence among children and residents of rural areas, which is not typical for HIV infections. These are the Kemerovo, Tyumen, Novosibirsk regions and

Chukot- cue autonomous okrug. In addition, in 22 regions of the Russian Federation, where HIV infection rates exceed the national average. Among them are Kemerovo, Irkutsk, Sverdlovsk, Orenburg and Samara region, where the HIV infection rate varies from 2069 people up to 1515 people per 100 thousand population. Thus, it can be noted that AIDS is quite new disease faced by humanity, and, to date, no effective drugs have yet been found that can completely cure read sick. At the same time, scientists distinguish that AIDS is not a sentence, since modern medicine allows a person with HIV infection to live to deep old age and even give birth to healthy offspring, which once again says

that the problem of HIV infection is very acute, but it can be solved.

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