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HIV INFECTION AND MOTHERHOOD

I.B. Kalniyazova¹, Zh.A. Rahmanova², G.T. Niyazova³

According to the results of the research analysis, the rate of HIV infection among pregnant women in the Republic of Karakalpakstan has been increasing in recent years. The disease is more common among unemployed women aged 30-34. Analyzes show that HIV infection screening of pregnant women is increasing year by year. According to the route of transmission, 92% of the transmission of the disease through the sexual route was found to be high.

Key words: HIV infection, pregnant women, labor migrants, risk factor, prevention.

Intrauterine infection, despite significant advances in diagnosis and treatment, remains an important problem of obstetrics and perinatology. Infectious diseases are still one of the main causes of perinatal losses worldwide[13]. HIV infection, like a fire, has now engulfed almost all continents. Perhaps no disease has ever asked scientists such serious riddles in such a short time [10]. The consequences for the fetus and newborn vary from asymptomatic infection to sepsis, malformations, and fetal death [11]. The use of screening diagnostics is one of the most important achievements of modern preventive medicine, but the approach to creating an optimal program should be multifactorial – it is necessary to take into account first of all epidemiological data, the availability of diagnostic and treatment methods, cost-effectiveness, etc. Improving screening examination programs for infections is a fundamental factor affecting the reduction of the frequency of adverse pregnancy outcomes, the frequency of infant morbidity, and mortality. This confirms the need for constant work in the field of improving the screening programs of pregnant women for infections following the latest research and development [7]. Timely admission of pregnant women under medical supervision and infection screening is very important for the effective prevention of vertical transmission of HIV infection[6]. Therefore, the recommendations of the British Royal Society of Obstetricians and Gynecologists and the American Society of Obstetricians and Gynecologists should offer HIV screening to all pregnant women during each pregnancy[1]. Transmission infection of sexually transmitted diseases (gonorrhea, chlamydia, trichomoniasis), including HIV infection, along with traditional "specific" inflammatory diseases of the genitals, continue to pose a real danger to the pregnant woman, fetus, and newborn.

Infection screening during uncomplicated pregnancy provides:

- microscopic examination of the discharge from the vagina, urethra, and cervical canal – 2 times (at the first visit and for 30 weeks. of pregnancy);
- blood test for syphilis – 3 times (at the first visit; at 30 weeks and 2-3 weeks before delivery);
- blood test for HIV – 2 times (at the first visit and the 30th week of pregnancy);
- examination for the presence of pathogens of TORCH infections
- * the complex and the presence of HBsAg and anti-HCV (at the first visit; the test for hepatitis B and C must be repeated in the third trimester of pregnancy).

Methods of penetration of the virus from the mother to the child are known: transplacental (antenatal), contact (contact with maternal blood and vaginal mucosa), occurring intranatally, and through breastfeeding. The maximum probability of HIV

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transmission from mother to child occurs during childbirth, when the fetus passes through the birth canal, and comes into contact with infected maternal blood and the mucous membranes of the genitals[3].

A huge problem is also the fact that most people are infected by carriers of the virus who are in the so-called "serological window" when a person is already infected, but the tests are still negative. It is still not possible to exclude the last factor [9]. The factors contributing to the transmission of the virus from mother to child are quite complex and diverse. Transmission of infection is facilitated by various pathological conditions and health conditions of the mother and fetus as a whole, violation of the protective function of the placenta, and peculiarities of the course of labor. The use of drugs, alcohol, promiscuous sexual relations during pregnancy, and malnutrition have a negative effect [8]. The experience of three-stage use of antiretroviral drugs (to a woman during pregnancy, during childbirth, and to a child) has shown the possibility of significantly reducing the risk of HIV transmission from mother to child (less than 2%). The appearance of ART changed the course of HIV infection and led to the fact that HIV infection became a chronic controlled disease. The main goal of ART is to preserve the quality of life and maximize its duration [12].

Antiretroviral therapy aimed at inhibiting HIV replication promotes partial restoration or activation of the immune system function. In several patients with severe immunosuppression, this may be accompanied by the risk of developing immunity restoration syndrome with the manifestation of opportunistic and secondary diseases leading to the deterioration of the general condition and death of the patient [4].

Thus, comprehensive measures are needed to improve pregnancy outcomes for women with HIV status to complement the ongoing therapeutic and preventive antiretroviral interventions, including in cases of premature pregnancy and premature birth[5].

Materials and methods: The materials of the study were the official reporting data for 2011-2021 of the AIDS Control Center of the Republic of Karakalpakstan. Epidemiological and static research methods were used in the work.

Results of their discussion: In recent years, the number of HIV-infected people in the Republic of Karakalpakstan has been steadily increasing, both among the general population and among women and children. Therefore, the issues of preventing the transmission of HIV from an infected mother to a child during pregnancy, childbirth, and breastfeeding, the life of "rejected children" born to HIV-infected mothers, providing them with medical and social assistance, and their upbringing and education have become urgent.

To prevent vertical transmission of HIV infection in the Republic of Karakalpakstan, 100% coverage is provided by testing pregnant women for HIV infection, and specific prevention of HIV-positive pregnant women and their children with antiretroviral drugs is organized.

In the infectious examination of HIV-infected pregnant women in the Republic of Karakalpakstan in 2011, 36,045, 2012 -36,677, 2013 -39,726, 2014 -41,562, 2015 - 41,772, 2016 -39,551, 2017 -38,825, 2018 -41 91,9 2018 -41867, 2020 -39842 and 2021 - 42408. Analyses show that the scale of HIV screening of pregnant women is expanding every year.

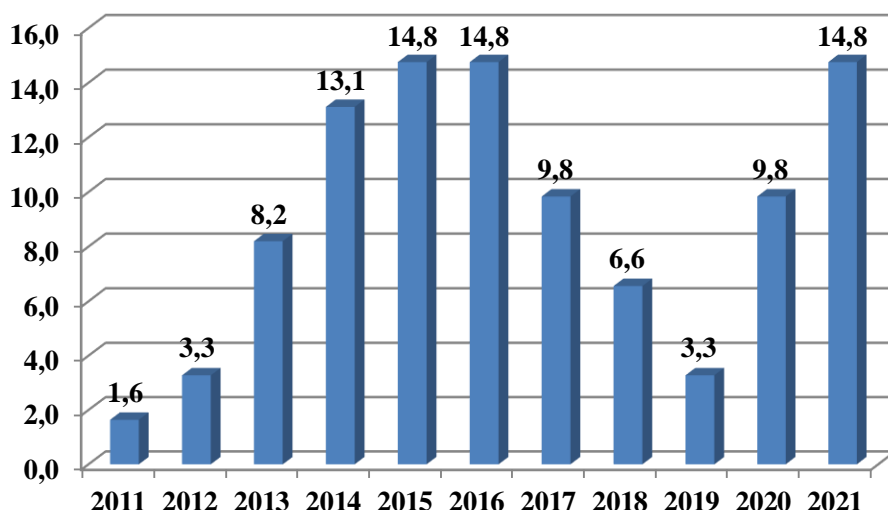


Fig. 1. Analysis of newly diagnosed HIV-infected pregnant women in 2011-2021 in the Republic of Karakalpakstan, (n=61)

In the Republic of Karakalpakstan, the highest rate of long-term morbidity of HIV-infected women was recorded from 2015 to 2020. In the period from 2011 to 2021, 440,236 pregnant women were tested for HIV, and the incidence was high in 2014-2016, and by 2021 the number of HIV-infected women is increasing again. It has been established that the incidence of HIV infection among women, including pregnant women, varies by year.

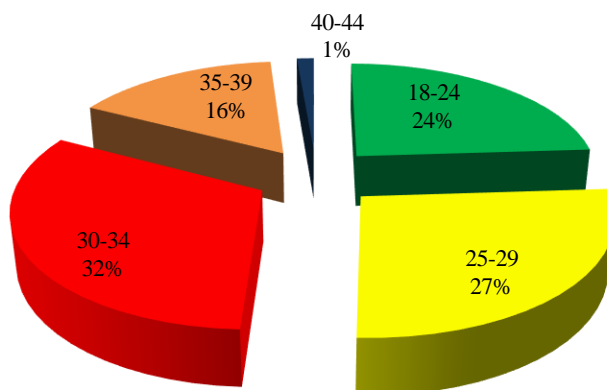


Fig. 2. Analysis of HIV-infected pregnant women by age in the Republic of Karakalpakstan in 2011-2021

It is known that one of the factors determining the intensity of HIV infection among the population is the age of patients. Given this rule, the study of age characteristics is of great importance. According to the results of the analysis of the age of HIV-infected pregnant women in the Republic of Karakalpakstan in 2011-2021, the highest age indicator of 30-34 years was established. The share of 25-29 years accounted for 27%, 35-39 years - 16%, 18-24 years - 24%, and pregnant women 40-44 years - 1%.

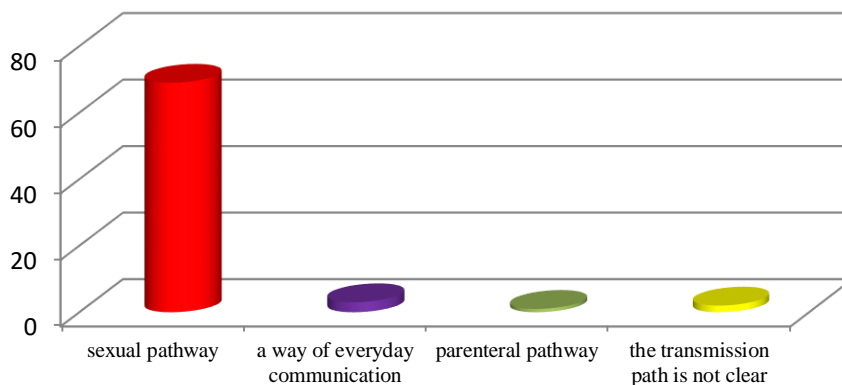


Fig. 3. Ways of HIV transmission to pregnant women in the Republic of Karakalpakstan in 2011-2021. analysis (%)

When analyzing the level of transmission by transmission routes, it was noticed that the spouses of most pregnant women, i.e. sexual partners, went to work for a long time as labor, sexual transmission of HIV increased. The prolonged absence of a sexual partner among migrant workers leads to risk factors that increase the likelihood of contracting sexually transmitted diseases. Among them, HIV is transmitted sexually (92%), by household contact (4%), and parenterally (1.3%), and the transmission path remains unclear in 2.6% of patients.

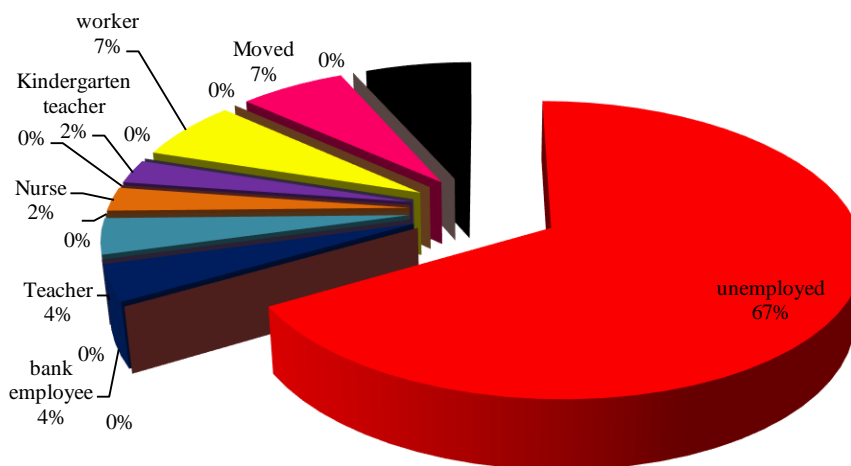


Fig. 4. Social status of HIV-infected pregnant women in the Republic of Karakalpakstan in 2011-2021. Analysis

The results of this analysis show that the prevalence of HIV infection among the elderly is closely related to the influence of social factors, to a greater extent than the factors listed above. According to the results of the analysis in 2011-2021, it was noted that among pregnant women, the prevalence of HIV is higher among those who do not work anywhere. 7% of patients moved to another place, and those who worked depended on their profession (kindergarten teachers and nannies - 2%, bank employees and teachers - 4%).

Conclusions: Progress has been made in the fight against infectious diseases in the Republic of Karakalpakstan, but the problem of HIV infection is still relevant. Therefore, it is necessary to cover pregnant women with perinatal HIV prevention and improve the quality of medical and social care for them. The classification of the social, clinical, and immunological status of pregnant women with HIV infection, as well as