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HIV INFECTION IN PREGNANT WOMEN

Baykhanova Nasiba
Department of Infectious Diseases
Andijan State Medical Institute Andijan. Uzbekistan

ABSTRACT

Statistics from the World Health Organization show that since the discovery of the disease, 79 million people have been infected with HIV in the world, according to data for 2018, the number of people living with HIV amounted to 37.9 million people and 1.7 million new cases of HIV infection were recorded . In 2018, 770,000 people died from HIV-related causes. Of the 37.9 million people, 62% received treatment and 53% achieved suppression of the HIV virus to a level that precludes the possibility of infecting another person. The vast majority (93.5%) of detected cases are in the adult population. The percentage of women is about half. And the number of deaths due to HIV, as can be seen from the above data, for the entire time of the study of infection is more than 35 million people.

The Republic of Uzbekistan, having acceded to the International Covenant on Economic, Social and Cultural Rights and recognizing other international principles and norms in the field of combating the spread of HIV/AIDS, has formed its own legal framework for the protection of human rights in the context of HIV/AIDS.

The basic principles of non-discrimination of people living with HIV and other citizens associated with this problem are enshrined in the Constitution of the Republic of Uzbekistan.

Similar signs of HIV in the initial stage are typical for about 30% of infected people. Another third of patients have no manifestations at all, and about 30-40% have a more severe course of the disease with signs of encephalitis, pneumonia, and a common herpes infection. The duration of manifestations is different - from 2-3 weeks to 3-4 months, after which any manifestations fade away, with the exception of lymphadenopathy, which often persists for a long time.

PURPOSE OF THE STUDY

To study the features of the course of HIV infection in pregnant women and optimize the schemes for chemoprophylaxis of perinatal transmission of HIV infection.

MATERIALS AND RESEARCH METHODS

The study was carried out on the basis of the Andijan Regional AIDS Center.

During the study, the clinical, virological and immunological parameters of women were evaluated for 2 years. The study included 30 women with HIV infection aged 18-35, of which 7 women (23.3%) were aged 18-25, 14 (46.7%) were aged 26-30, 9 (30.0%) at the age of 31-35 years, who are registered with the dispensary.

The mean age of the subjects was 26.9±0.7 years.

Among the examined women, 7 women (23.3%) were infected with chronic viral hepatitis B, 5 women (16.7%) were infected with chronic viral hepatitis C, 8 women (26.7%) had a herpes infection and 10 (33.3%)) had HIV monoinfection.

According to the anamnesis, only 2 (13%) patients were infected sexually from their spouses, the remaining 28 were infected through receiving medical services (87.0%).

The duration of HIV infection was up to 2 years in 19 (63.3%) of the examined women, up to 4 years in 10 (33.3%) women, and in 1 patient the duration of the disease was 5 years (3.3%) . On average, the duration of HIV infection in the examined women was 2.8 ± 0.7 years.

The stages of the disease were determined according to the "National clinical protocol for dispensary observation of patients with HIV infection" approved by the Order of the Ministry of Health of the Republic of Uzbekistan No. 81 dated March 4, 2015.

RESULTS AND DISCUSSION

The analysis of indicators of social, epidemiological and somatic anamnesis of the studied groups of women was carried out.

An analysis of marriage and family relations showed that all pregnant women were officially married, 22 women had children, the remaining 8 became pregnant for the first time.

Pregnant women were divided into stages of HIV infection in accordance with the 2015 National Clinical Protocol for Dispensary Observation and Treatment of Patients with HIV Infection.

In 13 (43.3%) women, the diagnosis of HIV infection was established during pregnancy, in 17 (56.7%) before pregnancy. The clinical condition in 13 (43.3%) women corresponded to stage 1, in 16 (53.3%) women of stage 2 and in the 1st (3.3%) patient of stage -3.

Anemia was detected in 27 (90%) pregnant women, mild anemia was detected in 24 pregnant women, and moderate degree in 3 pregnant women.

Somatic pathology in pregnant women was also predominantly noted as diseases of the endocrine system in 24 (80%) women, which in all cases was combined with anemia, diseases of the urinary system in the form of chronic pyelonephritis were found in 17 (56.7%) women. Diseases of the gastrointestinal tract in 8 (26.7%), respiratory organs - in 1 (3.3%), diseases of the musculoskeletal system - in 2 (6.7%) and diseases of the cardiovascular system were detected in 1 (3, 3%) of a pregnant woman.

Among the examined women, 7 women (23.3%) were infected with chronic viral hepatitis B and 5 women (16.7%) were infected with chronic viral hepatitis C.

Before starting antiretroviral therapy, pregnant women were diagnosed with mild anemia and mild thrombocytopenia.

When evaluating the indicators of a clinical blood test, significant differences were found between the indicators of hemoglobin, leukocytes and platelets before the start of ART and after the start of treatment, $p<0.05$. In the dynamics of the study - after 3 and 6 months - no significant differences were found in the studied groups in terms of the level of hemoglobin, erythrocytes, leukocytes and platelets. The main hematological blood parameters (hemoglobin, erythrocytes, leukocytes, platelets) both at the beginning of the study and during 6 months of the study were within the age norm and did not undergo significantly significant changes.

According to Table 3.5, it is noted that before the start of ART, the average level of ALT in the blood was 1.5 times higher than the upper limit of the norm, during the year there were no significant changes in this indicator ($p> 0.05$). According to other indicators - total bilirubin, creatinine, urea, glucose, amylase, alkaline phosphatase, total protein - were within the age norm during the entire observation period. Changes in the levels of cholesterol and triglycerides in the blood during the course of treatment were insignificant.

All 30 women developed pregnancy on the background of HIV infection. Although in 13 of them

(43.3%) HIV infection was detected during pregnancy, the results of the epidemiological investigation and clinical and laboratory data did not allow us to establish the acute stage of HIV infection in these women; therefore, it is most likely that they were infected before pregnancy. . The high rate of detection of HIV infection during pregnancy is due to 100% screening of all pregnant women for HIV infection.

If during the period from the beginning of pregnancy the average level of CD4+-T-lymphocytes was 318±42 cells/μl, then after 3 months it was 526±102 cells/μl. Then, against the background of ART, the level of CD4+-T-lymphocytes begins to increase naturally, reaching 567±103 cells/μl by the time of delivery, which is slightly higher than the initial level.

All pregnant women had no indications for lifelong ART at the start of the follow-up: CD4+ T-lymphocyte count was > 350 cells/mcL, viral load < 100,000 copies/mL. In 10 women during pregnancy, a transient decrease in the level of CD4 + T-lymphocytes was noted less than 350 cells / μl. This was a manifestation of the general trends in the reduction of CD4+-T-lymphocytes on the 28-168th day of pregnancy. In 6 women, a transient increase in viral load >100,000 copies/ml was detected once, with sufficient levels of CD4+ T-lymphocytes, which is not an indication for the start of lifelong ART.

Studies have shown that immediately after stopping ART and for the next 6 months, CD4+ T-lymphocytes remain at a higher level than before pregnancy. After 6 months, a decrease in the level of CD4 + T-lymphocytes begins. This correlates with achieving a significant viral load of 5000 copies/mL and above. As a result, already 8 months after the planned ART discontinuation, the level of CD4+ T-lymphocytes does not differ from the average before pregnancy. In the future, there is a regular decrease in the number of CD4+ T-lymphocytes by an average of 56 cells per year, parallel to the growth of the viral load by an average of 2576 copies per year.

The CD3+/CD4+ immunophenotyping panel used to analyze the level of CD4+ T-lymphocytes also includes the determination of CD3+-T-lymphocytes. The dynamics of CD3+-T-lymphocytes before, during and after pregnancy generally repeats the changes in the level of CD4+-T-lymphocytes, namely: a decrease in the first trimester of pregnancy with subsequent recovery by the third trimester (delivery), a gradual decrease after discontinuation of ART. If the average level of CD3+-T-lymphocytes in the first trimester of pregnancy decreases to 1298±30 cells/μl, then in the third trimester (before childbirth) it rises to 1375±17, not reaching, on average, the level before pregnancy, and remains at this level within 3.5 months. In the future, there is a decrease in the level of CD3 + -T-lymphocytes

The decision to initiate ART is based on the results of an assessment of the women's clinical status, CD4+ T-lymphocyte levels, and HIV viral load. Viral load should be > 100,000 copies/mL (virological indications), CD4+ T-lymphocytes < 350 cells/μl (immunological indications). Clinical indications may be opportunistic diseases related to stages 4B and 4C of HIV infection. All women during the follow-up period after delivery and after the planned withdrawal of ART had indications for the resumption of ART.

The following reasons for resuming ART have been identified, more often the main reason for the resumption of ART was a decrease in the level of CD4+-T-
lymphocytes below 350 cells/μl (immunological indications) – 21 women (43.8%). Combination of immunological and virological indications revealed in 14 women (29.2%). Increasing the viral

load to the level more than 100,000 copies / ml (virological indications) detected in 11 women (22.9%). In 1 woman, a combination of clinical and immunological indications for the resumption of ART, in 1 woman -a combination of clinical, immunological and virological indications for resumption of ART.

OUTPUT

During the first 14 weeks of pregnancy, the fetus is most vulnerable to any toxic effects of antiretrovirals. Taking antiretroviral therapy at this time may increase the risk of fetal abnormalities, so it is recommended to start prophylactic ARV treatment for pregnant women with HIV infection from the 14th week of gestation.

Pregnancy is a state of natural immunosuppression due to high levels of progesterone (a hormone that maintains pregnancy). In the absence of antiretroviral therapy, HIV during pregnancy can progress, move from a latent stage to a stage with complications, which threatens not only the health, but also the life of a pregnant woman. Therefore, it is necessary to start ARV therapy in a timely manner.

To reduce the risk of a child becoming infected with HIV, it is necessary to prescribe ARV drugs to the mother during pregnancy, childbirth, and to the child immediately after birth. Rational management of childbirth (if necessary, conduct a planned caesarean section). Feeding the baby formula milk instead of breastfeeding.

BIBLIOGRAPHY

1. Afanas'eva E. S., Polyanskaya R. T., Tskhai V. B. Analysis of the impact of HIV infection on the course and outcome of pregnancy // Siberian Medical Review. - 2002. - T. 24. - No. 4.
2. Afonina L.Yu., Fomin Yu.A., Voronin E.E. Antiretroviral therapy in children with HIV infection. Clinical recommendations // M., 2009.- P.60.
3. Belokoneva T.S., Gogel L.Yu., Lipatov I.S., Tezikov Yu.V. Clinical features of the course of pregnancy against the background of HIV infection and its outcomes. Samara. In the collection: Perinatal medicine: from preconception preparation to healthy motherhood and a strong family. //Materials of the scientific-practical conference dedicated to the 30th anniversary of the Perinatal Center of the SOKB. V.D. Seredavina. Ed. Yu.V. Tezikova, I.S. Lipatov. - 2015. - S. 34-39
4. Belopolskaya M. A. Influence of CHC and HIV infection on the course of pregnancy and childbirth / M. A. Belopolskaya et al. // Actual infections of the early XXI century: Sat. scientific tr. - SPb., 2001. - S. 24-28.
5. Belyakov N.A., Stepanova E.V., Rakhmanova A.G. et al. Epidemic of HIV infection in St. Petersburg / Under the general editorship of N.A. Belyakov, A.G. Rakhmanova, A.A. Yakovleva // Infectious Diseases -2009. Almanac.- St. Petersburg: NIIKH SPbGU, 2009.- S. 27-33.
6. Belyakov N. A., Rassokhin V. V. HIV and mental health: Medical thematic archive / Baltic Medical Educational Center. 2013. P.142
7. Belyakov N.A., Vinogradova T.N. Sexual transmission of HIV in the development of the epidemic // HIV infection and immunosuppression. - 2011. - V.3, No. 4. - P.7-17

8. Belyakov N.A., Rakhmanina N.Yu. and Rakhmanova A.G. Woman, child and HIV. - 2012. - S. 600.
9. Bobkov A. F. Human gene polymorphism and HIV infection / A. F. Bobkov // Journal of microbiology, epidemiology and immunobiology. - 2001.-№6. - P.82-87.
10. Bobkova M. R. Biology of HIV / Human Immunodeficiency Virus - Medicine // a guide for doctors under. ed. ON THE. Belyakov and A.G. Rakhmanova. - Balt. honey. image. Centre. - St. Petersburg. - 2010. - S. - 17-42.
11. Bobkova M. R. HIV drug resistance.-M.: Man, 2014.- P.288.
12. Bobkova M. R. Possible mechanisms of mutual influence of infections, caused by HIV and hepatitis C virus // Journal of Microbiology, Epidemiology and Immunology. - 2002. - No. 5. - P.104-115.
13. Bogoslovskaya E. V. Determining the concentration of HIV-RNA to assess the effectiveness of combination therapy for HIV infection /E. V. Bogoslovskaya, G. A. Shinulin, V. V. Pokrovsky et al. // Clinical and laboratory diagnostics. - 2001. - No. 2. - S. 15-19.
14. Vazquez E. de Parga. Analysis of mutations associated with drug resistance in untreated patients infected with various genetic forms of HIV type I, common in the countries of the former Soviet Union / E. Vazquez de Parga, A.G. Rakhmanova, L. Perez-Alvarez, A.N. Vinogradova, M. Thomson et al. // HIV infection and immunosuppression. - St. Petersburg. - 2010. - No. 2. - Volume 1. - S. 50-56.
15. Vartapetova N.V. Actual problems of prevention of HIV transmission from mother to child / N.V. Vartapetova, A.V. Karpushkina, T.A. Yepoyan - Verdi LLC. - 2010. - P.56.