



EPIDEMIOLOGICAL ANALYSIS OF THE HUMAN IMMUNODEFICIENCY VIRUS

Nematova Nigora Urakovna, Matnazarova Gulbaxor Sultanovna, Mustanov Azamat Yunusovich, Abdulkakharova Muattar Fakhridinovna, Xamaeva Nilufar Toshtemirovna, Bryanseva Elena Vlademirovna.

Tashkent Medical Academy, department of Epidemiology

Article history:

Received: February 6th 2023
Accepted: March 6th 2023
Published: April 10th 2023

Abstract:

Purpose: Conduct an epidemiological analysis of the incidence of human immunodeficiency virus in the Republic of Uzbekistan and improve its prevention.
Materials and methods: reporting data on the incidence of HIV infection of the republican and regional centers for the fight against AIDS and the results of testing for HIV in diagnostic laboratories. The work used retrospective and operational epidemiological research methods.
Results: As a result of a retrospective analysis of the incidence of HIV infection in the Republic of Uzbekistan and in Tashkent for the period from 1988-2020. revealed that there is an increase in cases of HIV infection. **Conclusions:** Thus, it was noted that cases of HIV infection are distributed unevenly across the administrative territories of the republic. The most important effective measure to combat HIV infection is prevention. Prevention of HIV infection should be carried out in a comprehensive manner in relation to the sources of the virus, mechanisms, routes and factors of transmission, as well as the susceptible population.

Keywords: HIV infection, analysis, morbidity, infection, cases, distribution.

The human immunodeficiency virus (HIV) is an infectious disease that has spread all over the world and has become one of the most acute problems of the XX and XXI centuries, in the health system and society, which is characterized by a wide spread in all countries of the world [1, 3,7].

For more than 40 years, the HIV epidemic has been spreading across the planet, turning into a huge pandemic on its scale, which today in some countries of the world causes enormous economic damage, destabilizes the epidemic situation and hinders the achievement of the Millennium Development Goals, both in the health sector and in other areas. Being the most complex medical and social problem, which includes, in addition to the illness and death of millions of people, economic and political aspects, it has acquired a worldwide character and has created a real threat to progress in the world. According to estimates of the Joint United Nations AIDS Programme (UNAIDS), since the first officially registered case, more than 40 years ago, the total number of cases in the world is about 76 million people. The HIV epidemic that emerged in the late 70s - early 80s of the last century, as a disease of certain "risk" groups and seemingly affecting the general population of the population little, has since turned into a global crisis of all social strata of society. Despite the fact that the HIV epidemic has

covered almost the entire globe, its development in different regions still has its own specific features and differences, the timely identification, study and knowledge of which can play a very significant role in choosing the right approach and implementing effective counteraction to the spread of the epidemic [6].

As of the end of 2021, according to WHO estimates, there were 38.4 million [33.9 -43.8 million] people living with HIV in the world, more than two thirds of whom (25.4 million) lived in the African region. In 2021, the global number of deaths from AIDS-related diseases was 650,000 [510,000-860,000] people. For comparison, in 2004 this figure was 2.0 million [1.6 million-2.7 million] people and 1.4 million [1.1 million-1.8 million] people in 2010 [4.2].

As of June 30, 2021, 1,528,356 people were registered among citizens of the Russian Federation with a confirmed diagnosis of HIV infection in the immune blot (according to preliminary data from persons infected with HIV cases), including: 1,122,879 Russians living with HIV and 405,477 deceased [10].

In the Republic of Uzbekistan, almost 40 thousand people living with HIV (PLHIV) have been identified and registered (studies for the period 2016-2019)



Currently (2022) 45 thousand people living with HIV infection are registered in Uzbekistan. Of these, 55% are men, and 45% are women. Of the total, 14% are children who have not yet turned 18. When analyzing cases of HIV infection by transmission routes, it was found that 74.2% of infections occurred sexually, 18.2% of people were infected through blood, and the virus was transmitted from mother to child in 0.3% of cases.

THE PURPOSE OF THE STUDY. To study the epidemiological features of the spread of HIV infection in the Republic of Uzbekistan and improve its prevention.

THE MATERIAL FOR THE STUDY was the reporting data on the incidence of HIV infection of the republican and regional AIDS control centers and the results of HIV testing in diagnostic laboratories. Retrospective and operative epidemiological research methods were used in the work.

RESULTS AND DISCUSSION. As a result of a retrospective analysis of the incidence of HIV infection in the Republic of Uzbekistan and in Tashkent for the period from 1988-2020, it was revealed that since 1988, when only 76 cases were first identified, there has been an increase in cases of HIV infection. As of November 1, 2020, 43,581 people living with HIV were registered in Uzbekistan. Over the year, this figure increased by 1,483 (in 2019, there were 42098 people living with HIV in Uzbekistan).

The risk of occupational infection in medical workers increases when providing medical care. Infection of a medical worker can occur during the performance of therapeutic and diagnostic manipulations, as well as during the collection and disposal of medical waste in case of traumatization (cut, prick, skin damage by bone fragments, etc.) and contamination of the skin and mucous membranes with biological fluids of the patient containing HIV viruses.

Thus, in Uzbekistan, in 2017, HIV infection was detected in 24 medical workers, in 2018 - in 33 cases, and in 2019, 45 cases of HIV infected among medical workers were detected.

In the sexual structure of HIV incidence, the proportion of males has traditionally prevailed. The increase in the proportion of women with HIV infection is an important indicator (including prognostic value), which can explain regional epidemiological features, indicate the leading determinants of the epidemic process, predict the scenario of the epidemic in certain regions and population groups. When analyzing HIV-infected

people by gender in 2020, it was found that in Tashkent, men made up 290 persons (62%), and women – 178 persons (38%). There is an increase in cases of HIV infection among men in relation to the total number of registered HIV-infected. An increase in HIV-infected men is noted in the following administrative territories of Tashkent city: in Shaikhantakhur district - 75.6%, Chilanar - 69.2%, Ulugbek - 67.9%, Sergeli - 57.7% and in Yakkasaray district - 56.3%.

To carry out preventive and anti-epidemic measures of HIV infection, it is of great importance to establish transmission factors. Both all over the world and in the republic in recent years, there has been an increase in the sexual transmission of HIV infection.

When analyzing the transmission of infection in 468 HIV-infected persons in 2020, it was found that the sexual transmission pathway was noted in 328 patients (70%), the parenteral transmission pathway was in 48 (10.3%), the vertical transmission pathway was detected in 2 cases (0.4%).

A woman with HIV can give birth to a healthy and strong baby, despite her diagnosis. However, there are clearly prescribed rules that should be followed at the stage of preparation for pregnancy and childbirth. In multiple pregnancies, a twin born first has a higher risk of infection than a child born second. The risk of fetal infection is also increased with prolonged labor, prolonged anhydrous period and fetal contact with a large amount of maternal blood.

The possibility of infecting a child with breast milk has been clearly established. The risk of infection during cesarean section is lower than during natural childbirth. It is scientifically proven that the transmission of HIV from mother to child during pregnancy and childbirth is 15-30%. In approximately 75% of these cases, HIV transmission occurs in late pregnancy and childbirth. About 10% of cases of vertical HIV transmission occur in the first two trimesters of pregnancy, another 10-15% — during breastfeeding.

Migrants, being an important source of economic development, make up a significant and growing proportion of the population. According to analytical estimates, more than 3% of the world's population migrates across borders every year in search of work. Migrants are more prone to risky behavior. The risk of sexual infection among them is higher than among the inpatient population. Social control over the behavior of migrants is sharply reduced when they leave the country. The vulnerability of migrants to HIV infection makes it difficult to use traditional approaches to solve these complex problems. Among the migrants of



Uzbekistan in 2017, HIV infection was detected in 656 people, in 2018 - in 588 migrants, the number of cases decreased by 68 cases.

Cases of HIV infection among migrants contribute to the growth of sexual transmission and transmission of infection to their family members.

When analyzing by codes, HIV infection in Uzbekistan is mainly detected by code 113 (according to clinical indications), so in 2020, infection was detected by this code in 1,437 individuals (35.7%). 466 persons (11.6%) were identified among persons who are in sexual contact with HIV-infected according to the 101 code. According to code 102, among patients with sexually transmitted diseases, infection was detected in 48 persons (1.2%), in persons with promiscuous sexual relations, infection was detected in 7 people, which was 0.2%.

Drug use is a major factor in the spread of HIV/AIDS. The probability of HIV infection, when using a single syringe, as a result of a single injection is 95%.

In 2020, out of the total number of registered HIV-infected people, injecting drug users accounted for 3.3%.

The above data on HIV infection of vulnerable groups indicate the need to strengthen further preventive measures, especially sanitary and educational work and an increase in HIV testing coverage among these contingents

CONCLUSIONS: Thus, it was noted that cases of HIV infection are unevenly distributed across the administrative territories of the republic. This phenomenon is explained by the period (prescription) of involvement in the epidemic process, socio-demographic characteristics, population density, degree of urbanization, proximity to drug trafficking of a particular territory, the level of involvement of young people in the migration process and many other circumstances.

The most important effective measure to combat HIV infection is prevention. HIV infection prevention should be carried out comprehensively in relation to the sources of the virus, mechanisms, ways and factors of transmission, as well as the susceptible population, including persons from vulnerable groups of the population. There are currently no specific means of preventing HIV infection in the world. Therefore, protection from this terrible disease in overwhelming cases depends entirely on the behavior and lifestyle of the person himself.

The main condition for maintaining health and preventing infection is moral purity and loyalty to the chosen life partner. Always and everywhere use only personal hygiene items (toothbrushes, razors, blades,

etc.). Avoid casual sexual relations; in case of such, be sure to use a condom. Not to have sexual relations with people who use drugs. Train yourself and your partner to use a condom systematically and correctly; this will help reduce the likelihood of contracting AIDS, protect against sexually transmitted diseases and unwanted pregnancy. To be sure, it is advisable to take an HIV test before getting married.

LITERATURE

1. Баранова А.Н. //Обоснование организационной модели профилактики социально-значимых заболеваний, опасных для окружающих // Автореферат. – Санкт-Петербург. 2016, 45 с.
2. Информационное письмо Республиканского центра по борьбе со СПИДом, 2020 г.
3. Крюкова В.А., Ганина Л.Ю., Турумова З.Ж., Сатарбеков И.К., Кадыров З.З., Махаматов А.А. //Основные эпидемиологического надзора за ВИЧ-инфекции// Учебное пособие. – Ташкент. 2011. С. 3.
4. Матназарова Г.С., Неъматова Н.У. //Эпидемиологическая ситуация по ВИЧ-инфекции в Республике Узбекистан// – Материалы //XXXIX Международной научно-практической интернет-конференции//. Переяслав-Хмельницкий – 2018. С. 516-519.
5. Неъматова Н.У., Матназарова Г.С., Абдукахарова М.Ф., Кутлымуратова Г.Д. Эпидемиологические особенности ВИЧ-инфекции в Республике Узбекистан. Журнал //Теоретическое и клинической медицины//. Тошкент. 2020. С. 130-131.
6. Неъматова Н.О., Матназарова Г.С., Абдукахарова М.Ф. //Эпидемиология и профилактика инфекции вирусом иммунодефицита человека // Учебно-методическое пособие для студентов медицинских вузов – Ташкент 2021.18-20 с.
7. Nigora U. Ne'matova¹, Muattar F. Abdukaharova², Umida A. Almatova³ //Epidemiological situation on HIV-infection in the Republic of Uzbekistan//. **Skopus**. Turkish journal of Physiotherapy and Rehabilitation; **32(2)** ISSN 2651 | e-ISSN 2651-446X (pdf/322/32-2-539. pdf). Pages: 4121-4126. www.turkjphysiotherrehabil.org.
8. Официальные данные Центра ВИЧ/СПИД в Ташкенте. 2020-2021 г.г. <https://www.gazeta.uz/ru/2020/12/02/hiv/>
9. Развитие эпидемии СПИД. ЮНЭЙДС, ВОЗ, 2020 г.



10. Сборник научных трудов //Современные методы диагностики, профилактики и лечения ВИЧ-инфекции// научно-практическая конференция с участием международных специалистов. г. Андижан 2018год
11. Справка ВИЧ-инфекция в Российской Федерации в первом полугодии 2020 г. © Федеральный научно-методический центр по профилактике и борьбе со СПИДом ФБУН Центрального НИИ эпидемиологии Роспотребнадзора.
12. Матназарова, Г. С., Азизова, Ф. Л., Брянцева, Е. В., Хамзаева, Н. Т. (2022). Вакцинопрофилактика Covid-19 в Узбекистане.
13. Toshtemirovna, K. N., Islamovna, S. G., & Sultanovna, M. G. (2023). the effectiveness of a new food substance-a hard gelatin capsule-" sedan bark" is being studied in children who have recovered from the coronavirus. British View, 8