



Priority Directions Of Improving The Geography Of The Spread Of Virus Diseases And The Nosogeographic Situation In Uzbekistan

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ABSTRACT

In this article, the geography of the distribution of viral diseases and ways to improve the nosogeographical environment are analyzed in detail, the main factors of the spread of hepatitis from viral diseases, how they are related to climate, geographical location and human activity are considered. Viral hepatitis and their spreading mechanisms, as well as environmental conditions that play a role in the epidemic of diseases, are analyzed. The article also defines important directions for the prevention and reduction of viral hepatitis diseases based on modern scientific research.

Keywords:

Viral diseases, distribution geography, nosogeographic environment, epidemic, infectious diseases, health care.

The geography of the distribution of diseases in the world and the need to protect public health is one of the most important aspects of global health issues, the spread of diseases depends on many factors, including climate change affects the spread of diseases, climate through changes in conditions, insects or microorganisms that spread diseases enter new areas. The rapid development of cities, population density and deterioration of sanitary conditions lead to the spread of diseases. In urban areas, infectious diseases can spread faster. Due to population migration and trade, diseases can quickly move from one place to another. In particular, pandemics (e.g., COVID-19) cause situations of global spread. The conditions and area of providing medical services to the population are also important, and diseases can develop faster in areas without medical assistance.

According to the 2024 global hepatitis report of the World Health Organization (WHO), the number of victims of this disease is constantly increasing. Hepatitis is the second leading infectious disease killer in the world, causing 1.3 million deaths per year, the same as tuberculosis, the leading infectious disease killer. This report, presented at the World Hepatitis Summit, highlights that despite improvements in diagnosis and treatment and cheaper medical products, coverage of testing and treatment remains stagnant. But if action is taken now, the WHO's goal of eliminating hepatitis by 2030 will be achievable. New data from 187 countries show that the estimated number of deaths from viral hepatitis has increased from 1.1 million in 2019 to 1.3 million in 2022, with 83% of them caused by hepatitis B and 17% by hepatitis C. Worldwide, 3,500 people die from hepatitis B and C every day [1]. Hepatitis is an inflammation of the liver caused by viruses and other infections, alcohol and certain drugs. This leads to a number of health problems, some of which can be fatal. Worldwide, 90 percent of people living with viral hepatitis are unaware of the disease, and 3,000 people die from the disease every day. The WHO Global Hepatitis Strategy, endorsed by WHO member states, aims to reduce new hepatitis infections by 90% and mortality by 65% between 2016 and 2030 [2].

According to WHO reports, children living in Central Asia are at high risk of contracting hepatitis A. In Central Asia, the most common ways of contracting this virus are poor hygiene and eating contaminated

water or unprotected food, especially fruits and vegetables. Other common factors contributing to the spread of hepatitis A are migration, low levels of economic development, and lack of access to clean drinking water. Hepatitis A is a viral infection that affects the liver and is usually spread through contaminated water or food. The risk of hepatitis A for children living in Central Asia depends on many factors, including lack of hygiene, as well as lack of clean drinking water and sanitation, which can lead to the spread of hepatitis A. A hepatitis A vaccine is available, but distribution and uptake varies by region. The risk of infection may be higher in areas with low vaccination rates. Food storage and preparation conditions can also increase the risk of illness [5]. To combat this problem, measures such as strengthening the health system, implementation of vaccination programs and promotion of hygiene rules are being taken by countries and international organizations.

In Uzbekistan, hepatitis (inflammation of the liver) is widespread in various forms, especially hepatitis A, B, C, D and E. Hepatitis is a problem that seriously threatens health in Uzbekistan, and several factors influence its spread [3, 4]. When analyzing the geography of the spread of hepatitis, the following conclusions can be drawn:

- The spread of viral hepatitis diseases is directly related to carelessness in sanitation, quality of medical services, drinking water supply and medical practices. These factors create favorable conditions for disease transmission, especially in rural areas. Even if medical services are well developed in big cities, poor sanitary and hygienic conditions in rural areas and lack of qualified medical care lead to widespread spread of viral hepatitis diseases. Kashkadarya, Surkhandarya, Samarkand and Syrdarya regions are the leaders in terms of the number of people infected with these diseases (2022) (table).
- The main way of spreading hepatitis A virus is through water and food. This disease is most common in areas with poor water supply or sanitation. In Uzbekistan, hepatitis A is more common in rural areas, in areas with poor quality drinking water or poor sanitation. The prevalence of the disease is especially high in regions such as Kashkadarya, Surkhandarya, Syrdarya regions and Tashkent city (see table).
- The spread of hepatitis B virus is carried out mainly through blood, including many times through incompletely sterilized instruments, sexually, and also can be passed from mother to newborn babies. In Uzbekistan, the high level of hepatitis B spread is observed in all regions, the number of people suffering from this disease is the majority in Kashkadarya, Bukhara and Syrdarya regions. Although medical services are developed in some urban centers (Tashkent, Samarkand), the prevalence of this disease is high in rural areas.

Table.
Incidence of viral hepatitis in the population by region
(2022, per 100 000 people)

Areas	viral hepatitis	viral hepatitis "A"	viral hepatitis "B"
Republic of Uzbekistan	82,6	81,9	0,4
Republic of Karakalpakstan	13,1	12,3	0,3
Andijan	17,5	17,4	0,1
Bukhara	7,4	6,2	0,6
Jizzakh	32,5	31,9	0,5
Kashkadarya	251,2	248,4	1,3
Navoi	23,5	23,2	0,2
Namangan	37,3	36,9	0,1
Samarkand	202,3	201,8	0,4
Surkhandarya	212,9	212,6	0,2
Syr Darya	42,7	42,1	0,5
Tashkent	37,3	36,9	0,3
Ferghana	28,4	28,2	0,1
Khorezm	4,4	4,1	0,2

Tashkent city	39,7	38,6	0,3
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The table was compiled based on the materials of the Statistical Agency under the President of the Republic of Uzbekistan.

In Uzbekistan, hepatitis diseases are spread to different degrees in different regions. In general, the spread of hepatitis mainly depends on the sanitary and epidemiological conditions, the quality of medical services and the level of people's knowledge about health [3]. In order to prevent the disease, immunization, improvement of sanitary and hygienic conditions, as well as medical examinations and diagnoses should be carried out effectively. The spread of hepatitis in Uzbekistan depends on many factors. Sanitary-epidemiological conditions, including drinking water supply, sewage systems and compliance with general hygiene rules, affect the spread of hepatitis viruses. Also, the quality of medical services is important. Non-observance of sanitary norms in medical institutions or incorrect use of medical equipment can increase the risk of transmission of hepatitis viruses [6, 7]. The level of public health information also plays an important role. It is necessary for the population to have information on leading a healthy lifestyle and prevention of hepatitis. Therefore, preventive measures, promotion of a healthy lifestyle and public awareness are very important. Vaccination programs to prevent hepatitis are also appropriate. Hepatitis vaccination programs are being implemented in Uzbekistan, which will help reduce the spread.

Renovation of medical facilities, training of qualified personnel and expansion of health services in order to improve the nosogeographical environment in general; inform the population about viral diseases, provide education on methods of their prevention, and promote a healthy lifestyle among the population using mass media; study personal hygiene rules and encourage those who follow them (especially food safety) [8]; use of modern technologies (management systems, mobile applications) in detecting and monitoring viruses; to pay attention to ecological stability, to protect the soil, water and air from pollution in order not to harm nature; it is desirable to cooperate with international organizations in the fight against viral diseases, to support the production of vaccines and to increase their use. Through these ways, it will be possible to reduce the spread of viral diseases and improve public health

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