

How to Cite:

Makhmudova, L. B., & Saidakhmedova, D. B. (2022). Some epidemiological aspects of helminthiasis in the samarkand region. *International Journal of Health Sciences*, 6(S1), 4004–4010.
<https://doi.org/10.53730/ijhs.v6nS1.5730>

Some epidemiological aspects of helminthiasis in the Samarkand Region

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Abstract---The paper describes the dynamics of the population of the Samarkand region in 2016-2020. All districts were divided into 3 zones – hyperendemic, low-endemic and medium-endemic. Hyperendemic foci were observed in Nurabad and Pakhtachi districts. Medium-endemic - Kattakurgan and Ishtykhan districts. Monthly morbidity analysis notes the seasonality of the disease - March-August months, with the peak of the disease from April to July months. The use of intensive indicators made it possible to identify weak fluctuations in annual morbidity levels in the long-term dynamics, which occurred against the background of a moderate trend towards a decrease in morbidity.

Keywords---hymenolepidosis, intensive indicator, epidemiology, Samarkand region.

Introduction

The spread of parasitic diseases is currently an urgent problem of all mankind. In his letter to the participants of the meeting on the control of parasitic infection (2004), the WHO Director-General noted that more than two billion people in the world suffer from diseases associated with intestinal parasites [World Health Organization. Report of the third global meeting of the partners for parasite control. Deworming for Health and Development Geneva, 29–30 November 2004]. These diseases contribute to the deterioration of the health and well-being of the poor in the countries of the world [World Health Organization. Report of the third

global meeting of the partners for parasite control. Deworming for Health and Development Geneva, 29–30 November 2004]. The resolution of this meeting noted that the negative impact of diseases caused by parasites on the health and social development of society is comparable to the impact of diseases such as tuberculosis, malaria and HIV/AIDS. It was recognized that the main risk group for such diseases are children of school and younger ages [World Health Organization, UNICEF. Prevention and control of schistosomiasis and soil-transmitted helminthiasis. Joint statement. 2004]. The preventive use of anthelmintic drugs in these groups is part of the national policy of some countries of endemic regions [World Health Organization. Report of the third global meeting of the partners for parasite control. Deworming for Health and Development Geneva, 29–30 November 2004].

The high incidence of helminthiasis in the children's contingent serves as an indication for the use of mass anti-helminthiasis treatment, which is considered by WHO as one of the highly economical ways to ensure rapid improvement of children's health, prevent mental and physical development delay of the younger generation and improve the effectiveness of schooling [To. Evgenandieva, T.A. Abdiev, 2000].

The epidemiological situation of parasitic diseases in the Russian Federation remains tense. A.A. According to Yasinsky et al. (2001), in 2000 more than 1.5 million patients with helminthiasis were identified in the country. G. G. According to Onishchenko (2000), about 20 million people in the country are infected with helminthiasis annually.

Control over the spread of parasitic infection involves the implementation of measures for the gradual deworming of the target population, ensuring maximum stability of this process [World Health Organization. PPC Newsletter. Action against worms. February 2007, Issue 8]. There are many facts in favor of the effectiveness of regular deworming activities among children under 5 years of age and school age [World Health Organization. PPC Newsletter. Action against worms. February 2007, Issue 8].

It is obvious that these activities contribute to the achievement of the Millennium Development Goals not only in developing, but also in developed countries of the world [World Health Organization. The Millennium Development Goals. The evidence is in: deworming helps meet the Millennium Development Goals. 2005]. Studies conducted in Kenya have shown the importance of deworming measures in the growth of per capita income, and according to some data, such measures became one of the reasons for Japan's economic growth in the fifties of the last century [World Health Organization. The Millennium Development Goals. The evidence is in: deworming helps meet the Millennium Development Goals. 2005].

Positive results on deworming were obtained in Nepal, the Philippines, Indonesia, and South Korea, where these activities have become part of national health programs [World Health Organization. Controlling disease due to helminth infections. Geneva 2003].

Despite the planned anti-helminthic measures, helminthiasis in the republic occupies a significant share in the regional pathology of man. These facts and data confirm the need to develop a unified standard of medical care for helminthiasis for children under 14 years of age in Uzbekistan.

Unfortunately, official statistical data on the prevalence of parasitic diseases among younger children in Uzbekistan over the past 10-12 years is insufficient. There are only some data on the epidemiology of helminths in foothill and mountain rural settlements.

Due to the fact that the protection of children from parasitic diseases in Uzbekistan is under the control of the head of state. In the Message of the President Shavkat Mirziyoyev, the Oliy Majlis and the People of Uzbekistan, dated December 29, 2020, indicated that the main tasks before medicine were singled out separately to improve sanitary and epidemiological quality, to expand the scale of digitalization of the medical sphere, the imposition of telemedicine, **free provision of children under 15 years of age with 7 types of vitamins and antiparasitic drugs**. The program will cover 17 million people and allocate 100 billion soums.

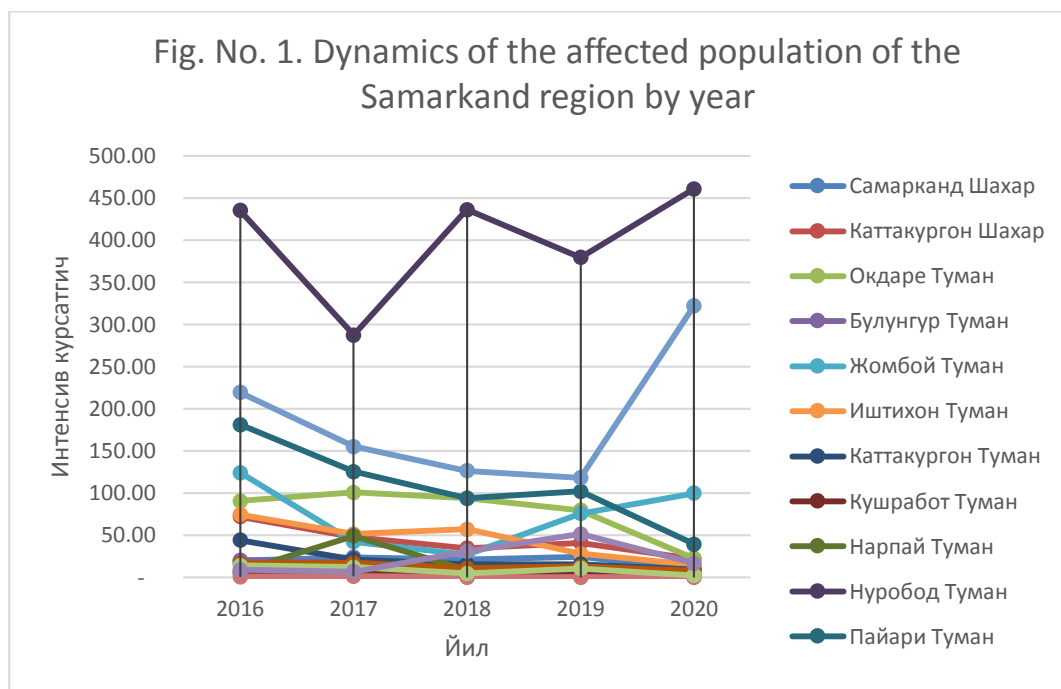
It can be seen from the above that the system of measures for epidemiological control and prevention and the fight against parasitic diseases in children has not been sufficiently studied, which also applies to the Republic of Uzbekistan, since these issues have never been the focus of attention of researchers.

The purpose of the study

Monthly and seasonal distribution of the incidence of hymenolepidosis in the districts of the Samarkand region for 2016-2020. For this purpose, the seasonal and monthly distribution of patients in the districts of the Samarkand region from 2016-2020 was studied.

Materials and methods

The analysis of morbidity was carried out according to the monthly and annual reports of the regional Samarkand CSSEN for 2016-2020. In total, 9185 patients with hymenolepidosis were registered in the Samarkand region for the period from 2016 to 2020. Of these, in 2016 - 2425, in 2017 -1734, in 2018 – 1772, in 2019 – 1878, in 2020 -1386 people. The dynamics of the distribution of patients by districts and year is shown in Figure No. 1.

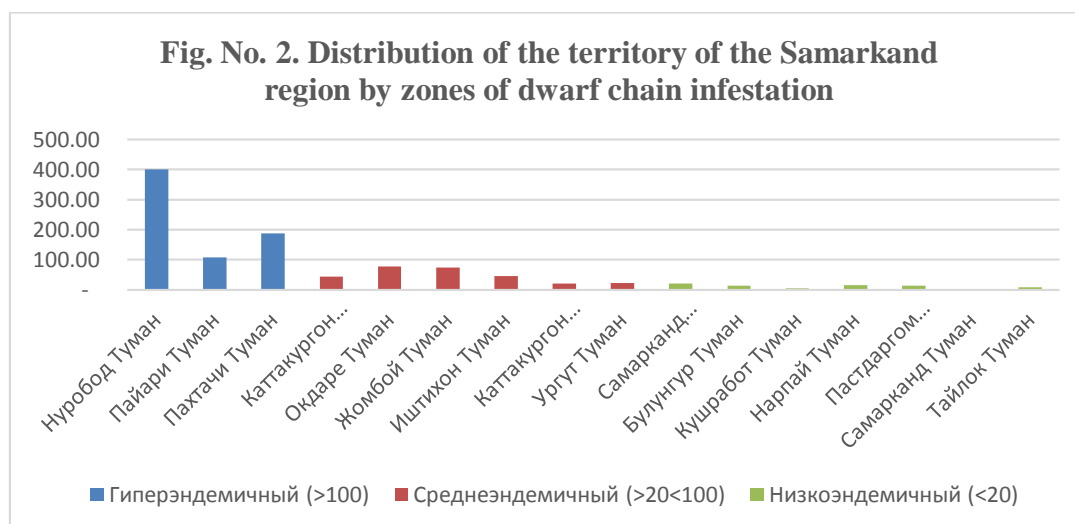


According to the intensive indicator, we divided the entire territory of the Samarkand region into 3 zones. The intensive indicator ranged from 0.86 to 461.0.

Zone 1 - intensive indicator from 0~20; low-endemic zone.

Zone 2 - medium endemic zone - intensive indicator from 21~100.

Zone 3 - is a hyperendemic zone with an intensive index above 100 (Figure No. 2).



The hyperendemic foci included Zhambay, Nurabad, Pakhtachi and Payaryk districts. Nurabad district and Pakhtachi district took the 1st place, where for 5 years the incidence of dwarf tapeworm was consistently high. Intensive indicator

for 2016-2017-2018-2019-2020. Made up 435,4-287,6-436,54-379,67-461,09 accordingly. In the Pakhtachi district for 2016-2017-2018-2019-2020 was 219,66-155,42-126,4-118,14-322,6.

In Zhambai district in 2016, the intensive indicator was 124.15; and in 2017-2018-2019-2020. it has dropped to 42,1-26,9-78,8-99,96 accordingly. Payaryk district in 2016 (intensive indicator – 181.2), 2017 (intensive indicator 125.3), 2019 (intensive indicator 101.98) was included in the zone of hyperendemic focus; and in 2018 (intensive indicator 98.3), 2020 (39.36) passes into the zone of srendneendemic focus.

The average endemic zone included the city of Kattakurgan - the intensive indicator for 2016-2017-2018-2019-2020 was – 72,02-47,62-34,50-40,89-21,35 accordingly;

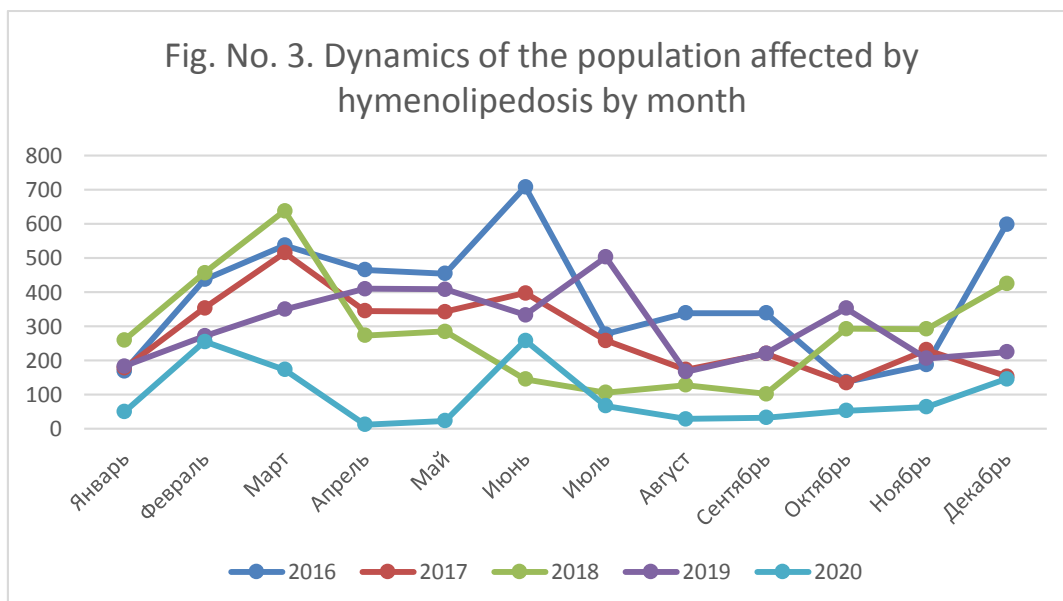
Ishtikhansky district – 74,4-51,5-57,03-27,86-24,94;

Kattakurgan district - in 2016-2017 - the intensive indicator was 44.1-21.4, and from 2018-2020 - it steadily decreased to a low-endemic focus.

Samarkand, Bulungursky district, Tailak, Urgut, Kushrabatsky district, Samarkand rural district were assigned to the low-endemic zone. Here, intensive indicators have not consistently exceeded 20 for 5 years.

The lowest incidence was observed in the Samarkand region

The analysis of the monthly and seasonal distribution of patients with hymenolipedosis showed that the increase in the number of patients with hymenolipedosis is observed from March to July, the largest number of infected – from May to July; in August there is a decrease in the number of patients. The smallest number of infected was registered in December- January. (Fig. No. 3)



This trend was observed in all years from 2016-2020.

Conclusions

Helminthiasis is an endemic disease for the Samarkand region. It is characterized by pronounced unevenness in territorial distribution. The hyperendemic zone is highlighted: Nurabad district, Pakhtachi district, Payaryk district. The middle endemic zone includes Kattakurgan, Ishtikhon district and Zhambay district. Low-endemic zone – Samarkand, Bulungur, Samarkand rural district, Tailyak, Urgut, Kushrabat district, Narpay district. The seasonality of the disease is noted in the spring-summer period. The increase in the number of patients is noted from March to July. The peak incidence is from May to July.

The dynamics of long-term morbidity for the period from 2016-2020 showed that the monthly distribution of invasive patients remained the same over the years. The paper describes the dynamics of the population of the Samarkand region in 2016-2020. Monthly morbidity analysis notes the seasonality of the disease - March-August months, with the peak of the disease from April to July months. The use of intensive indicators made it possible to identify weak fluctuations in annual morbidity levels in the long-term dynamics, which occurred against the background of a moderate trend towards a decrease in morbidity.

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