

## From the History of the Fight against Malaria in the Ferghana Region in the Late 19th - Early 20th Centuries

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**Abstract**. This article analyzes the widespread prevalence of malaria in the Ferghana region in the late 19th and early 20th centuries and its impact on the social life of the population, the coverage in historical sources and archival documents of the causes of the spread of this disease in the region and its serious social consequences, the issues of establishing medical traditions and medical methods in the fight against malaria. The article also presents conclusions on the specifics and problems of combating malaria.

At the end of the 19th and beginning of the 20th centuries, infectious diseases spread in Turkestan, including the Ferghana region, for various reasons, and in some cases became epidemics. Despite measures aimed at preventing the spread of infectious diseases, the lack of timely and high-quality medical care for the population has led to serious social consequences among the population.

The most common infectious diseases in the Fergana region were measles, plague, and smallpox, posing a threat to the health of the population from time to time. Archival sources and reports from the periodical press confirm that among these diseases, the most common is malaria, which has chronic recurrences and has the most serious social consequences.

At the end of the 19th and beginning of the 20th centuries, malaria was so widespread that its scale was determined in millions of figures. During this period, malaria ranked first among infectious diseases in the entire Russian Empire. Every year, the number of people infected with malaria was about 5-6 million people. Malaria was particularly prevalent in remote areas. Sadly, in the Russian Empire, more people were dying from malaria than from wars.

Especially in the Turkestan region, which was part of Russia, this disease had very serious consequences. For example, in the period from 1893 to 1902, 39,640 people died from malaria in Turkestan alone in the Tashkent district<sup>1</sup>.

Different forms of measles are found in the region, which are divided into simple and destructive. The first of them was harmless, although the disease lasted a long time, it did not pose a significant threat to the patient, and its treatment was relatively easy. The second was very dangerous and required serious attention and skillful treatment. Due to the untimely provision of qualified medical care to such patients, its consequences often resulted in death. The regions of the Bukhara Khanate, the Zarafshan Valley, and the cities of Jizzakh were considered the places where this disease was most prevalent. In the Khodzhan and Tashkent districts, as well as in the Ferghana Valley, a severe and often fatal form of malaria was widespread<sup>2</sup>.

<sup>&</sup>lt;sup>1</sup> И.Кассирский. Минг йилларни ортда қолдириб. Тошкент: Ўзбекистон КП Марказий Комитетининг Бирлашган нашриёти, 1969. – 12 б.

<sup>&</sup>lt;sup>2</sup> Местное обозрение. Эпидемия малярии в Средней Азии. Ср. Аз. Вестник, 1896. №9. стр. 93-94.

According to the sources, high humidity, bogs in rice fields, pollution of irrigated streams, which are the main source of drinking water, and the living conditions of the local population have long been the main cause of the spread of malaria in the Fergana region<sup>3</sup>. According to the Russian doctor who worked in Turkestan at that time,..."in the autumn and winter, people die from the "slow heat" as a result of the bite of thousands of people by varnishing mosquitoes in the marshes of cities that are covered with mud up to their hips, and in the summer, the soil covers the roads that are covered up to the knees of people"<sup>4</sup>. Every year, in July, August, and September, malaria epidemics spread in various regions of the region, resulting in deaths. Most patients were unable to work for a long time due to chronic fever and could not recover without special medical care.

In the summer of 1901, malaria spread in the villages of Sang, Gadoy Topmas, Khodjaabad, Kelachi, Pop, Ultarma, Uyghur, and Marguzar in the Papsky district of the Namangan district, and in the villages of Gurumsaray, Tepakurgan, and Pungon in the Chadak district. From August 30 to October 2 of this year, the doctor of the Fergana region, doctor of medicine V. Popov, together with the district doctor, visited the regions where malaria spread, studied the causes of the disease and took measures to eliminate it. In August of this year, 318 out of 15,577 people living in these villages contracted malaria, and 65 became victims of this infectious disease. According to the district doctor and the head of the district, the majority of those who fell ill with malaria and died in 1900 were those who went to work in the rice plantations of the Tashkent district. In 1901, it was found that about 4,000 workers from the Chust and Chadak volosts went to work in the Chirchik and Angren fields of the Tashkent district. Most of the patients with leprosy recovered with the drug quinine. In all villages, patients were given this medicine, and the reserve of medicine was given to the village oqsoqoli and ellikboshi. According to the order, the district doctor provided medicines to the elders and heads of the village, and the population was accustomed to receiving them<sup>5</sup>.

In September 1901, Malaria also spread in the villages of Kenagas and Taipan in the Karakalpak region of the Kokand district, infecting 510 people, of whom 28 died. The head of the district, concerned about the worsening of the disease, appealed to the governor of the region with a request to organize outpatient treatment centers in these villages. Later, this issue was considered at the Council of the Governor-General of Turkestan and rejected due to the lack of funds for the construction of an outpatient clinic. Instead, it is decided to send two specialists from the Turkestan Military District as auxiliary forces to provide medical care to sick patients. In October, feldsher Leontiev Demenkov and Fyodor Kosovets from the 9th Turkestan Rifle Battalion arrived in the regions and provided medical care to those suffering from malaria for a month<sup>6</sup>.

According to statistical reports, in 1901, the population of the Ferghana Region was 17,30833 people, a total of 9,1225 patients were registered in hospitals and out of hospitals, and 526 deaths were registered among them. Among the patients, 1,8489 people were diagnosed with malaria, of whom 402 died. It is evident that 20.2% of registered patients over the past year were registered with malaria, while 76.4% of deaths, i.e., the majority, were observed among those with malaria.

It should be noted that among the military personnel stationed in the region, the disease was the most common. In 1887-1892, on average, 612 out of every 1,000 soldiers in the region were registered with various diseases, and the death rate was 12 per 1,000. Between these years, the incidence of malaria increased by an average of 7 times, and the number of deaths increased by 8 times<sup>7</sup>.

<sup>&</sup>lt;sup>3</sup> Қаранг: Н.Васильев. Наша общая беда и как помоч ей (По вопросу об усиленной заболеваемости в Туркестане). (Окраина, 1895. №61) Туркестанский сборник, Т.463. стр. 41-55; П.В. О влиянии рисовых полей на здоровье населения. (На рубежу, 1909. №108.) Туркестанский сборник, Т.502. стр. 179-181; Местное обозрение. Эпидемия малярии в Средней Азии. (Ср. Аз. Вестник, 1896. №9). Туркестанский сборник, Т.523. стр. 21-27; Извлечение из отчета амбулаторной лечебницы для туземных женщин и детей в г. Андижане, за 1888 год. Туркестанские ведомости, 1889. №48; Извлечение из отчета амбулаторной лечебницы для туземных женщин и детей в г. Коканде, за 1888 год. Туркестанские ведомости, 1889. №51; Отчет Наманганской амбулаторной лечебнице для туземных женщин и детей (за 1889 год). Туркестанские ведомости, 1892. №46.

<sup>&</sup>lt;sup>4</sup> И.Кассирский. Минг йилларни ортда қолдириб. Тошкент: Ўзбекистон КП Марказий Комитетининг Бирлашган нашриёти, 1969. – 14 б.

<sup>&</sup>lt;sup>5</sup> Ўзбекистон Миллий архиви (бундан кейин Ўз МА), И.1-жамғарма, 5-рўйхат, 1066-иш, 239-варақ.

<sup>6</sup> Ўз МА, И.19-жамғарма, 1-рўйхат, 14967-иш, 1,3,6,9-варақлар.

<sup>&</sup>lt;sup>7</sup> Н.Васильев. Наша общая беда и как помоч ей. (По вопросу об усиленной заболеваемости в Туркестане). Окраина, 1895. №65. Туркестанский сборник, Т.463. стр. 41-55.

The main reason for the high mortality rate among malaria patients was the inability to provide timely medical care to patients due to a shortage of medical personnel and medicines in the villages. Local administrations were unable to implement measures to eliminate malaria at the expense of local funds even in the context of the epidemic. Thus, in order to eliminate the aforementioned malaria epidemic, the regional doctor sought permission to spend only 300 rubles on the purchase of 20 pounds of quinine and 2 poods of clove oil to the governor of the region, and the governor of the region, in turn, to the Governor-General of Turkestan. On September 13, 1901, in 1901-1903, only 600 rubles were allocated in Namangan and a number of other districts for the purpose of combating malaria. This year alone, 359.12 rubles of this amount was spent on the purchase of medicines. It should be noted that the allocated funds were insufficient for measures to prevent and treat malaria, which is expected to spread next year. Conclusions about this were noted in the notification of the regional doctor to the name of the regional governor asking for funds from the local budget to create a drug reserve against malaria.

Certain measures were taken to stop the spread of malaria among the population or mitigate its serious consequences. However, the prevention and elimination of the disease was much more difficult as a result of the difficult everyday life of the local population, their suspicious attitude towards innovations and unfamiliarities. Although the existing conditions required not outpatient treatment, but inpatient treatment (in hospitals), the main work was limited to the distribution of quinine to tens of thousands of patients through outpatient hospitals and midwives by district doctors and district administration. Although local doctors were useful in the treatment of various endemic and general mild diseases, they were not effective in the spread of epidemic diseases.

With the spread of information about the effective use of quinine in malaria among the local population, the need for this drug has increased, and a situation has begun with the sale of quinine among entrepreneurs in the region. When the introduction of this drug into wide circulation began, Russian criminals fraudulently sold wolf, lime, and other white and yellow powder in capsules that came in the size of ten grams under the guise of quinine for 20 kopecks<sup>8</sup>.

In 1911, a drug called "salvarsan" or "606" began to enter the Turkestan region, including the Ferghana region, which had great success in treating malaria. In the region, great trust and hope were expressed in this drug for treating malaria, and information about its benefits was widely disseminated throughout the region from the first days of its arrival<sup>9</sup>. In recent years, thanks to this drug, a decrease in the prevalence of malaria among the population has been achieved.

In conclusion, in the late 19th and early 20th centuries, combating infectious diseases in the Ferghana region was one of the main problems of the healthcare system. The main reason for the high mortality rate among the population affected by malaria is, firstly, the lack of opportunities to provide timely medical care to patients as a result of a shortage of medical personnel and medicines, and secondly, the inability of local authorities to independently increase measures to eliminate malaria at the expense of local funds, even in conditions of a malaria epidemic. Subsequently, as a result of the penetration and spread of modern pharmaceutical achievements in the region, significant positive changes have been achieved in the fight against malaria.

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<sup>&</sup>lt;sup>9</sup> Малярийная заболевания в Фергане//Туркестанские ведомости, 1911. №165.

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