

RETROSPECTIVE EPIDEMIOLOGICAL ANALYSIS OF CUTANEOUS LEISHMANIOSIS INCIDENCE IN THE REPUBLIC OF UZBEKISTAN

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✓ Resume

The article presents an analysis of official data of the State Center for Sanitary and Epidemiological Surveillance of the Republic of Uzbekistan on cutaneous leishmaniasis for 2010-2018. To study the dynamics of the incidence of cutaneous leishmaniasis in the Republic of Uzbekistan were carried out a retrospective analysis of data on the prevalence of cutaneous leishmaniasis in the Republic of Karakalpakstan and regions for 2010-2018 years.

Key words: cutaneous leishmaniasis, retrospective analysis, epidemiology.

РЕТРОСПЕКТИВНЫЙ ЭПИДЕМИОЛОГИЧЕСКИЙ АНАЛИЗ ЗАБОЛЕВАЕМОСТИ КОЖНЫМ ЛЕЙШМАНИОЗОМ В РЕСПУБЛИКЕ УЗБЕКИСТАН

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✓ Резюме

В статье проанализированы официальные данные Государственного центра санитарно-эпидемиологического надзора Республики Узбекистан по кожному лейшманиозу за 2010-2018 годы. Для изучения динамики заболеваемости КЛ в Республике Узбекистан был проведен ретроспективный анализ данных по распространенности кожного лейшманиоза в Республике Каракалпакстан и вилоятх за 2010-2018 гг.

Ключевые слова: кожный лейшманиоз, ретроспективный анализ, эпидемиология.

ЎЗБЕКИСТОН РЕСПУБЛИКАСИДА ТЕРИ ЛЕЙШМАНИОЗИ БИЛАН КАСАЛЛАНИШНИНГ РЕТРОСПЕКТИВ ЭПИДЕМИОЛОГИК ТАҲЛИЛИ

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✓ Резюме

Ушбу мақолада Ўзбекистон Республикаси Давлат санитария-эпидемиология назорати марказининг 2010-2018 йиллар учун тери лейшманиози бўйича расмий маълумотлари таҳлил этилган. Мақолада Қорақалпоғистон Республикаси ва вилоятларда тери лейшманиози билан касалланиш даражасини динамикада ўрганиш мақсадида 2010-2018 йиллар оралиғидаги маълумотлар вилоятлар кесимида ўрганилган.

Калит сўзлар: тери лейшманиози, ретроспектив таҳлил, эпидемиология.

Introduction

Leishmaniasis is a parasitic disease caused by an intracellular parasite of the genus *Leishmania*, transmitted to humans by the bite of infected female phlebotomine sandflies [1]. Cutaneous leishmaniasis (CL) is the most common form of leishmaniasis and causes skin lesions, mainly ulcers, in open areas of the body, after which scars, severe disability or stigma remain for all life.

According to the World Health Organization data, about 95% of CL cases occur in the countries of the American continent, in the Mediterranean basin, the Middle East and Central Asia. In 2017, more than 95% of new cases of CL occurred in 7 countries: Algeria, Afghanistan, Brazil, Iraq, Iran (Islamic Republic of), Colombia and the Syrian Arab Republic. It is estimated

that between 600,000 and 1 million new cases of the disease occur annually in the world [2].

In Central Asian countries, the main endemic areas are located in Uzbekistan and Turkmenistan, where CL is an urgent problem [2]. In the neighboring Republic of Kazakhstan, CL is registered mainly in the Kyzyl-Orda and South Kazakhstan regions. In the southern regions of Kazakhstan, the disease occurs in the form of zoonotic CL of the second, rural type [3].

Uzbekistan is an endemic region for CL [4]. Official data do not reflect the true picture of the incidence, especially in regions that were not previously considered as endemic area. In recent years, along with zoonotic CL caused by *Leishmania major*, anthroponous CL caused by *Leishmania tropica* has again been diagnosed in the Republic.

The purpose

To study the dynamics of the incidence of CL in the Republic of Uzbekistan for 2010-2018.

Materials and methods

The official data of the State Center for Sanitary and Epidemiological Surveillance of the Republic of Uzbekistan were analyzed for 2010-2018. The dynamics of CL incidence in the Republic of Uzbekistan was carried out a retrospective analysis of data on the prevalence of CL in the Republic of Karakalpakstan and regions of the country for 2010-2018 y.

Results and discussion

There are natural foci of leishmaniasis on the territory of the Republic of Uzbekistan. According to the official

data of the Republican State Center for Sanitary and Epidemiological Surveillance, the CL incidence in 2017 was increased by 32% (512 and 741 cases in 2013, and in 2017 respectively, the intensive rate per 100 thousand population increased from 1.7 to 2,3). The CL incidence increased in the following regions of the Republic in 2017: Surkhondaryo region - by 60% (from 123 cases to 309 cases), Samarkand region - by 78% (from 10 cases to 46), Bukhara region - by 15% (from 106 to 124), in the Jizzakh region - by 23% (from 67 to 87) and 35% in the Navoiy region (from 13 in 2013 to 20 cases). In 2016 local cases of CL were recorded in the Tashkent region.

Study of CL morbidity in region sit was established the highest value of CL morbidity (intensive rates) for last 8 years were recorded in Surkhondaryo region: in 2011, and 2017 morbidity intensity amounted to 4,0 and 12,8 respectively. For the analyzed period, the average value was 7.1 (fig 1).

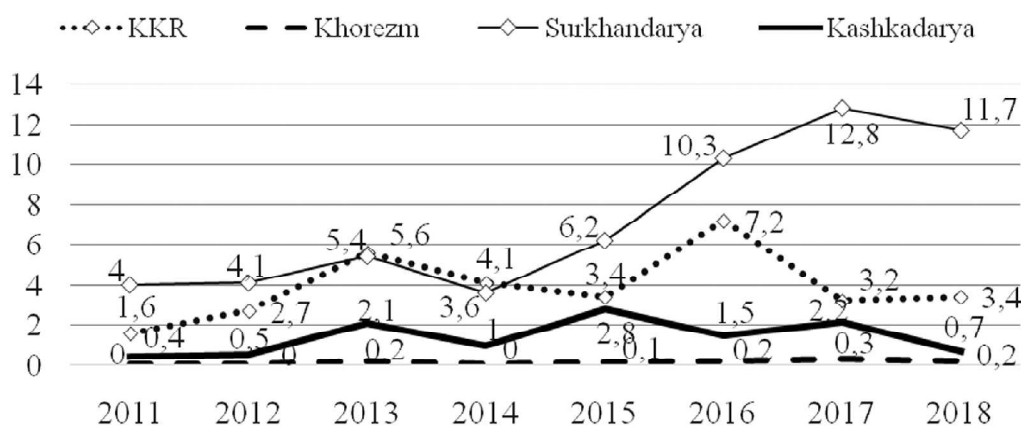


Fig. 1. The CL incidence (by years, intensive rates).

In terms of CL prevalence in the Republic Karakalpakstan took the second place. The average CL prevalence in this region was 3,4 in 2010, and 5,6 in 2013 respectively. The highest value was recorded in 2016 - 7,2; by 2018 the CL incidence decreased by half, amounting to 3.2 per 100 thousand people.

The Bukhara region was in third place in terms of CL prevalence: in 2010 the intensive rate was 4.5, in 2017 it reached the highest level- 6.0; and by 2018 it decreased to 6.2 (Fig. 2).

By the intensity of CL infectiousness the Navoiy region were close to the Bukhara region: in 2010 the

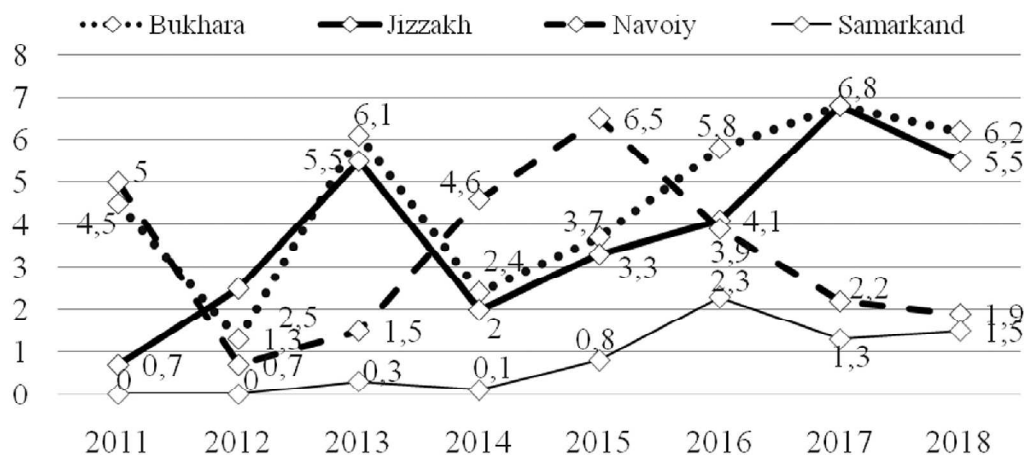


Fig. 2. The incidence of CL (distribution by years, intensive rates)

intensive rate amounted to 5.0 per 100 thousand people, in 2015 the highest value was detected - 6.5; in 2018 3.4 fold decrease in morbidity was observed and it amounted to 1.9.

In 2010 the CL incidence was not registered in the Jizzakh region, but in 2011 the incidence rate was 2.5 per 100 thousand people, increased in 2017 to 6.8, and in 2018 it decreased to 5.5 per 100 thousand people.

In analyzing period, the CL incidence was low and averaged 0.7 in the Samarkand region. Cases of CL also occurred in Kashkadarya region and analysis of the last 8 years showed that the average level of the morbidity was 1.2 per 100 thousand of the population.

The CL incidence analysis among children under 14 years old for 2010-2018 showed that in 2010 the CL incidence among children was 20.5%, and in 2018 this index increased to 41.4% (Fig. 3).

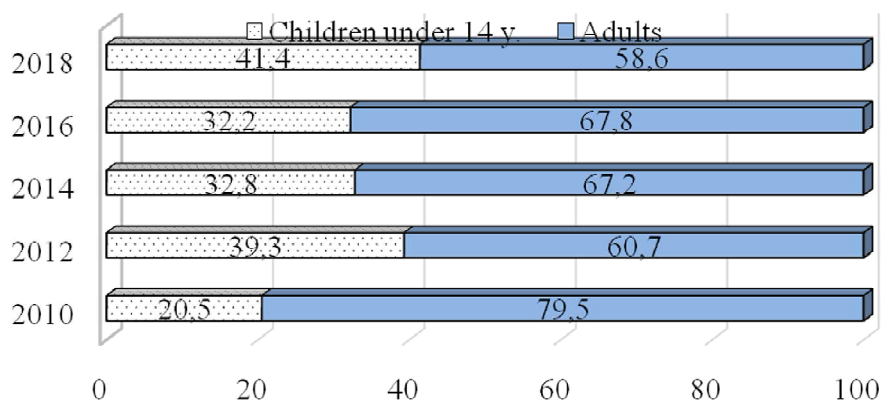


Fig. 3. The percentage of children with cutaneous leishmaniasis in 2010-2018.

Over the past 8 years, the CL incidence of CL was of wave-like character, and intensive rate was the highest (7.3 ± 1.3) in the Surkhandarya, an average level in the Republic of Karakalpakstan, Bukhara, Jizzakh, Navoiy regions amounted to 3.9 ± 0.6 . The CL incidence was significantly lower (0.5 ± 0.02) in Kashkadarya, Samarkand, Syrdarya, Ferghana, Khorezm and Tashkent regions over the past 8 years. CL was not registered in Andijan, Namangan regions and in the city of Tashkent.

Conclusions

On the basis of the CL incidence data, it can be concluded that CL is unevenly distributed in the Republic.

Apparently, this is due to the climatic, geo-geographical, parasitological conditions of the regions and the intensification of internal population migration.

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