



**EPIDEMIOLOGY ANALYSIS OF TREATED PATIENTS WITH SKIN LEISHMANIASIS IN
DJIZAK REGION (UZBEKISTAN)**

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Abstract

According to official data, the incidence of cutaneous leishmaniasis is the last 5 years; in endemic areas, Uzbekistan is growing markedly. Given the increase in the incidence rate among the population of the republic, it is necessary to conduct an annual epidemiological analysis of the detection and spread of this disease, with the aim of timely monitoring and prevention. [1,4,5]

Keywords: Cutaneous Leishmaniasis, epidemiology, mosquitoes, endemic zone.

Leishmaniasis - a group of diseases caused by representatives of the genus *Leishmania*, the simplest parasites that infect numerous species of mammals, including humans. The disease is transmitted by more than 30 species of mosquitoes, mainly belonging to the subgenus *Phlebotomus*. Depending on the vectors of mosquitoes and geographic distribution The different *Leishmania* species differ in virulence, in the clinical symptoms they cause. However, they all have a similar life cycle, consisting of a stationary phase of amastigotes in mammals and a flagellar form with a promastigote in insects. [4,5,6]



In addition, CL cases began to be registered in territories previously considered epidemiologically safe [6,7]

On the territory of the Republic, there are two forms of cutaneous leishmania - anthroponous CL and zoonotic CL. Anthroponous cutaneous leishmaniasis is caused by *Leishmania tropica*, where humans are the only reservoir and source of infection. The causative agent of zoonotic cutaneous leishmaniasis is *Leishmania major*, the source and reservoir of wild and domestic animals, and humans play the role of casual host. Each type of parasite circulates in natural foci of infection, where sensitive phlebotomins and mammals coexist. [1,9,6]

On the territory of the Republic of Uzbekistan there are two natural focal zones of cutaneous leishmaniasis: [4,7,8]

1. Highly active, which includes: Surkhandarya (Termez, Angora and Muzrabad regions), Bukhara, Karshi, Navoi, Jizzakh regions.

2. Inactive: Autonomous republic of Karakalpakistan, Kyzyl Kum desert.

During the analysis of morbidity in different regions of the republic, it was found that CL is distributed unevenly.

Таблица 1

Степень распространения КЛ В Ресбулике Узбекистан с 2001 по 2018 год

ГОРОД / ГОД	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Общ.к-во.
Ташкент	-	1	-	-	-	-	-	-	-	-	-	-	4	-	2	5	5	2	19
Андижан	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Бухара	42	42	49	33	34	26	25	68	138	268	74	23	112	52	6	107	123	106	1388
Джизак	-	-	-	-	-	-	-	2	-	-	8	29		26	43	52	87	74	389
Кашкадарья	37	101	108	45	21	20	11	10	19	62	11	14	61	29	84	46	67	22	768
Навои	-	9	1	3	5	8	7	17	9	40	49	26	27	64	78	51	44	25	463
Наманган	1	1	1	4	3	1	5	10	25	20	15	16	5	5	13	10	7	9	151
Самарканд	3	8	2	-	-	-	-	-	-	1	4	1	10	13	32	98	43	66	281
Сурхандарья	21	12	105	155	86	50	10	38	105	203	84	89	123	87	150	248	309	293	2168
Сырдарья	-	-	1	-	-	-	-	-	-	-	-	-	2	4	8	10	15	6	46
Таш.Область	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	10	14	11	39
Фергана	-	-	3	-	-	-	-	-	-	3	4	3	27	4	2	5	1	-	52
Хорезм	2	3	-	-	1	-	-	-	6	3	4	-	3	2	6	36	5	4	75
Каракалпакстан	18	77	38	11	6	6	8	23	86	30	27	44	96	72	61	129	73	63	868
Общ.к-во.	124	254	308	251	156	111	66	168	388	630	280	245	539	359	547	807	793	681	6707



Materials and methods

The material for the analysis was:

1. Data of anamnestic, clinical, epidemiological and laboratory studies of patients with proven CL who applied to the clinic of the Research Institute of Medical Parasitology named after L.M. Isaev in the period from 2014 to 2018. This took into account the gender, age, living conditions of the patients, as well as the location of skin lesions, their number, size and age of existence.

Parasitological confirmation of the diagnosis was carried out by microscopy of a smear from an ulcer stained with Azur II-Eosin after fixation with 96% ethanol in order to superimpose amastigotic forms of Leishmania (Borovsky's bodies).

2. We used the official reporting data of the Agency for Sanitary and Epidemiological Welfare of the Republic of Uzbekistan

Results and Discussions.

In total, from 2014 to 2018 at the Clinic of the Research Institute of Medical Parasitology named after L.M. Isaev, 704 confirmed cases of CL were registered, the age of patients varied from 11 months to 82 years, the average age was 26 years.

Catching of mosquitoes was carried out from the first ten days of May to September.

The number of confirmed CL cases from patients from Zhizak region, over a five-year period, amounted to 152 (21.5%). The lowest rate of confirmed cases was observed in 2014, with only 21 (13.8%) cases. The highest in 2017 - 36 (23.7%) cases.

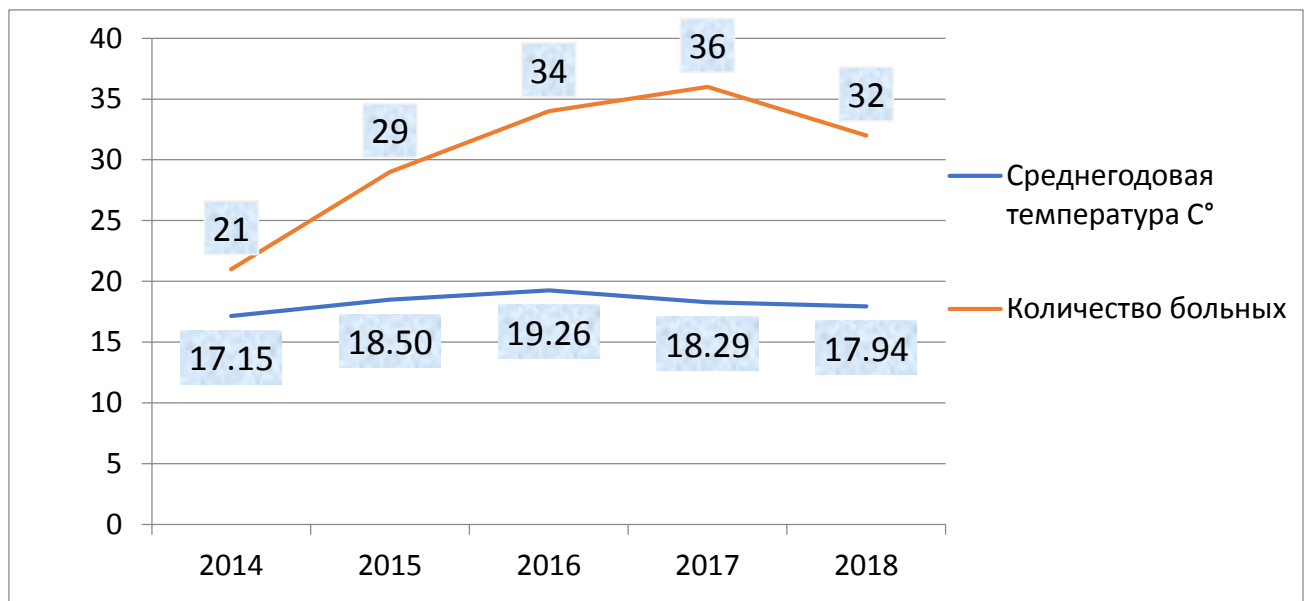


Table 2. Dependence of the occurrence of CL among the population on the ambient temperature. 65 (42.7%) males and 87 females (57.3%), respectively.

Of the 152 confirmed cases, 66 (43.42%) accounted for city residents, while the remaining 86 (56.58%) cases were unevenly distributed in the regional centers of the region and adjacent territories.



The largest number of requests from patients from rural areas is explained by the characteristic features of the structures of the courtyards of local residents, in particular, adobe houses with a wide courtyard, with outbuildings for cattle and small cattle, with irrigation irrigation ditches for vegetable gardens, in some courtyards there are ponds that serve as a reserve for water.

At the same time, the largest number was observed in three regional regions of the Jizzakh region: Zamin, Sharaf Rashidov and Gallaaral.

There were only 4 familial cases over a five-year period, while in two of them all family members were affected (from 3 to 5 people), in other families only children under 14 were infected.

Of the total number of confirmed patients, children under 14 years old accounted for 130 (85.5%) cases. According to the localization of skin ulcers, the largest number, in 47% of cases, were located on the face, 26% on the hands, 19% on the legs and 9% of the ulcers were of mixed localization.

When analyzing the applications received from patients from the Jizzakh region: 52% of patients were referred to the Clinic of the Research Institute of Medical Parasitology named after L.M. Isaev to confirm the preliminary diagnosis, 34% had experience of referring to the clinic, 6% of applications by gravity, and only 8% of patients returned ...

As we can see from the above data, the number of patients with cutaneous leishmaniasis in Jizzakh region over a five-year period does not have a tendency to decrease. The uneven distribution of the incidence of the disease in different regions, apparently, is associated with the peculiarities of social and natural factors affecting the epidemic.

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