

## Statistics of the incidence of cutaneous leishmaniasis in the Bukhara region, depending on age, gender and region.

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**Annotation:** *Cutaneous leishmaniasis is a widespread tropical infection caused by many different species of Leishmania protozoa, which are transmitted by mosquitoes. Its clinical manifestations are extremely diverse and depend on many parasite and host factors that are poorly understood. Uzbekistan is also one of the epidemiological regions for cutaneous leishmaniasis. The article presents a collection of age, gender and inter-district statistics for the Bukhara region.*

**Keywords:** *Cutaneous leishmaniasis, Bukhara, lymphangitis*

Leishmaniasis is a zoonotic disease caused by an obligate intracellular protozoan parasite of the genus *Leishmania*, which maintains its life cycle by transmitting infection from the sand fly to the mammalian host [1].

The annual number of newly registered cases of leishmaniasis in 2008 was about 400 15 thousand [2], and by 2013 it reached 1.5-2 million [3].

On the territory of the Republic of Uzbekistan there are two natural focal zones of cutaneous leishmaniasis: [4.5.6.] 1. Highly active, which includes: Surkhandarya (Termez, Angora and Muzrabad districts), Bukhara, Karshi, Navoi, Jizzakh regions. 2. Inactive: Autonomous Republic of Karakalpakstan, Kyzyl Kum desert.

The age composition of patients with cutaneous leishmaniasis is also gradually changing; if at the end of the last century, pediatric patients prevailed, in recent years it is predominantly the adult population, about 75-90% of cases [7,8].

Epidemiological studies have shown that cutaneous leishmaniasis is characterized by a certain seasonality [9,10]. The first patients appear at the end of May, then the incidence increases, reaching its maximum in September-October, and then there is a gradual decline in the incidence, when in December and January there are already isolated patients with cutaneous leishmaniasis, and in these cases, it is usually late visiting patients with cutaneous leishmaniasis [11,12,13].

Currently, in the countries of Central Asia, visceral and cutaneous (urban type) leishmaniasis is practically eliminated, however, zoonotic cutaneous leishmaniasis (ZCL) continues to occupy a certain place in the regional pathology [14, 15].

It should be emphasized that the nature and type of settlements of natural carriers of the pathogen are changing, settlement populations of mosquitoes appear [16,17]. Analysis of the long-term incidence of CL shows that rises are observed in about 5-7 years and can continue for 2-3 years in a row [18].

In humans, the typical course of zoonotic cutaneous leishmaniasis is caused only by *L. major*, but *L. turanica*, as shown by limited studies, can cause abortive dermatosis in humans and lead to their

subsequent resistance to *L. major* [19 ].

### Purpose of the study

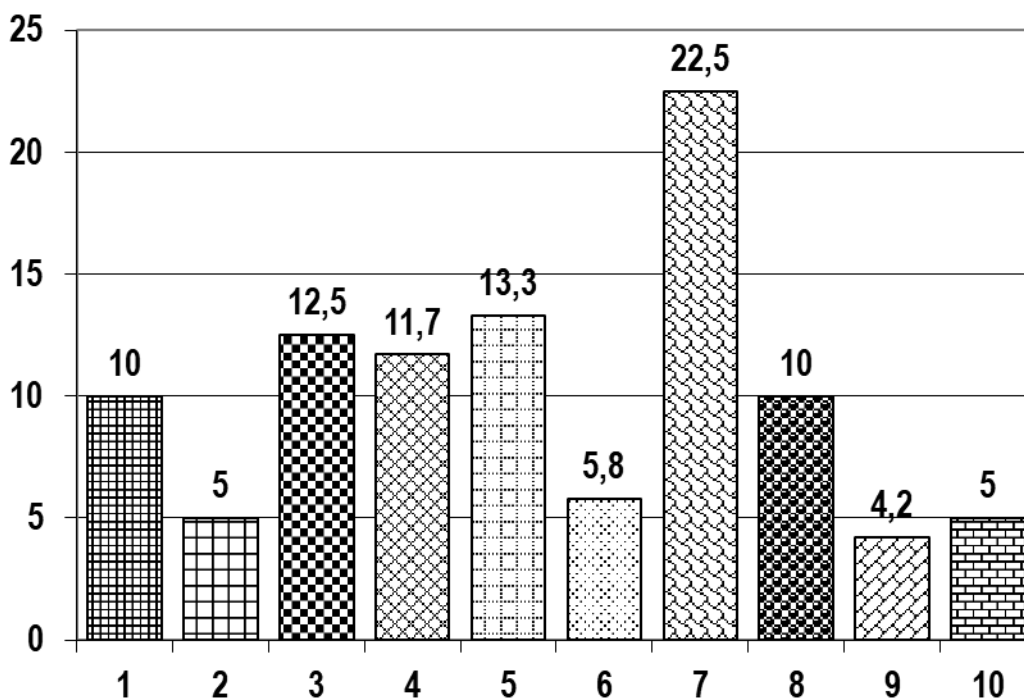
Collection of statistics of cutaneous leishmaniasis in Bukhara region by age, sex and regions

### Material and research methods

Based on the set goals and objectives of the research, we examined and treated 90 patients with zoonotic cutaneous leishmaniasis, who are residents of the Bukhara region of the Republic of Uzbekistan.

### RESULTS AND DISCUSSION

Figure 1 shows patients with cutaneous leishmaniasis depending on the place of residence.



Note: 1 - Peshku, 2 -

Gendar, 3 - Vobkent, 4 - Romitan, 5 - Kagan, 6 - Gijduvan, 7 - Shafrikan, 8 - Karakul, 9 - Bukhara and Bukhara region, 10 – Olot

Rice. 1. Distribution of patients with CL depending on the place of residence

As can be seen from Fig. 1, the largest number of patients were residents of the Shafrikan region, the area of which is characterized by semi-desert and, due to their professional activities, patients were constantly in the most epidemic centers of CL.

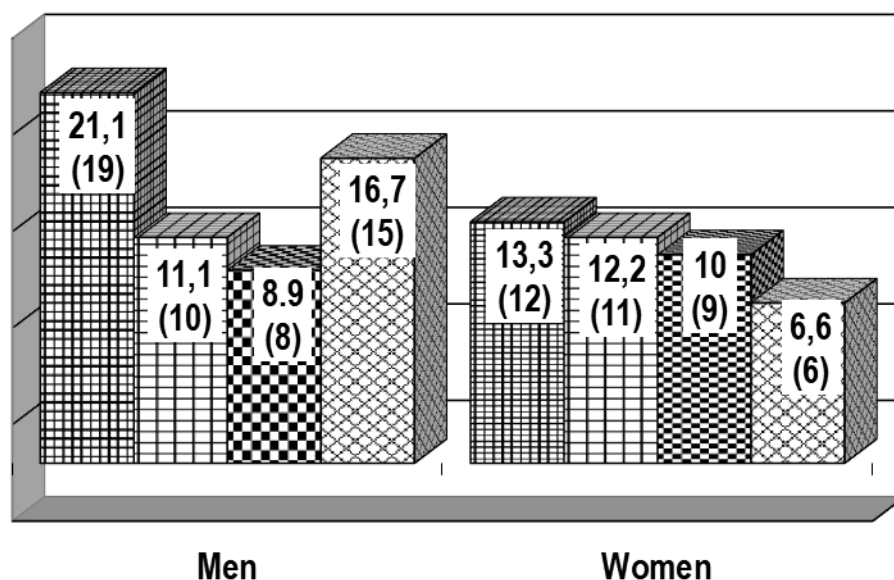
As can be seen from the data presented, all patients with CL are residents of different regions of the Bukhara region. In this regard, it was not possible to accurately determine the incubation period of cutaneous leishmaniasis in this sample of patients.

When studying the anamnesis of patients, it was found that in most patients at the beginning of the disease, specific rashes of bright red color, the size of a pea, appeared in various areas of the skin, which were accompanied by moderate subjective sensations and slight edema. Ulceration was observed in patients on average 15-20 days after the appearance of tubercles. As a rule, in the central part of the formed tubercles, punctate necrosis developed with the formation of a dense dark crust on the surface. When the latter was removed, the bottom of the ulcer was whitish in color with insignificant serous

discharge. It should be noted that leishmaniomas increased in size due to the disintegration of the surrounding infiltrate. In some cases, there was a peripheral growth of leishmaniasis ulcers as a result of which extensive lesions were formed, of a directional form with abundant purulent-necrotic discharge.

According to the clinical forms, the patients were distributed, according to the classification of P. V. Kozhevnikov, as follows: ulcerated leishmaniomas without complications (group 1 of patients) were observed in 38 (31.7%) patients; leishmaniomas with lymphangitis and lymphadenitis (group 2 of patients) - in 28 (23.3%) patients; leishmaniomas with tubercles of seeding (group 3 of patients) - in 25 (20.8%) patients; leishmaniasis with lymphangoites and tubercles of seeding (group 4) - in 29 (24.2%) patients with zoonotic cutaneous leishmaniasis.

The distribution of patients by gender and clinical forms of zoonotic cutaneous leishmaniasis in percentage and number is shown in Figure



- Ulcerated leishmanioma
- Leishmanioma with lymphangitis and lymphadenitis
- ▣ Leishmaniasis with tubercles
- ▤ Combined specific complications

2.

Rice. 2.

Clinical distribution of patients with CL by gender accessories

As can be seen from the data presented, there were no significant differences in clinical manifestations in males and females, since the studied forms occurred with approximately the same frequency. Thus, ulcerated leishmanioma occurred in 19.2% of men and in 12.5% of women. Therefore, in the future, the considered clinical forms can be generalized into one group, regardless of gender.

Next, we were interested in the question of the possible relationship between the age of the patients themselves and the clinical manifestations of zoonotic cutaneous leishmaniasis. The results of this analysis are presented by us in Table 1.

As can be seen from the data presented in Table 1, mainly patients with various clinical variants

of CL were between the ages of 20 and 50 (72.5%), which confirms the urgency of this problem, since the disease occurs in an active, able-bodied population that is actively moves and gets bitten by mosquitoes.

Table 3.1

Distribution of patients with CL by age

Group	Up to 20 years		20-30		31-40		41-50		Over 50	
	abs	%	abs	%	abs	%	abs	%	abs	%
1, n=28	5	5,6	6	6,7	4	4,4	7	7,8	6	6,7
2, n=18	4	4,4	8	8,9	3	3,3	2	2	1	1
3, n=25	5	5,6	8	8,9	4	4,4	5	5,6	3	3,3
4, n=19	4	4,4	7	7,8	2	2	4	4,4	2	2
Total	18	20	29	32,3	13	14,1	18	19,8	12	13

The effectiveness of treatment is influenced by the timing of any disease, including zoonotic cutaneous leishmaniasis, which was analyzed and presented in Figure 3.

As can be seen from the data presented, the largest number of patients (89.2%) was with a disease duration of up to 45 days. This indicates a late appeal of patients for medical help, when complications of CL are already developing, which will subsequently lead to torpidity in relation to the treatment being carried out.

#### LITERATURE

1. Changes in skin leishmaniasis after local treatment FA Makhmudov, SK Gulomova ACADEMICIA: //An International Multidisciplinary Research Journal 11 (1), 1744-1749.
2. Hengg, U.R. Cutaneous leishmaniasis / U. R. Hengg, A. Marini // Hautarzt. – 2008. – Vol.59. – p. 627-332
3. Sosa, N. Randomized, double-blinded, phase 2 trial of WR 279,396 (paromomycin and gentamicin) for cutaneous leishmaniasis in Panama / N. Sosa, Z. Capitán, J. Nieto, M. Nieto, J. Calzada, H. Paz, C. Spadafora, M. Kreishman-Deitrick, K. Kopydlowski, D. Ullman, W.F. McCarthy, J. Ransom, J. Berman, C. Scott, M. Grogil // Am J Trop Med Hyg. – 2013. – № 89 (3). – P. 557-563
4. Муратов Т.И., “Современные эпидемиологические аспекты кожных лейшманиозов в Узбекистане” Ачилова О.Д, Сувонкулов У.Т.//Журнал Вестник Ташкентской медицинской академии No1, 2018, стр. 28.,
5. Сувонкулов У.Т., Этиология кожных лейшманиозов в Эндемичных регионах Узбекистана на примере Джизакской области. Ачилова О.Д., Муратов Т.И. Эпидемиология и инфекционные болезни” изд. “Медицина”.Том 24 No3 -2019 ст.123
6. Сувонкулов У.Т., Современная характеристика природного очага зоонозного кожного лейшманиоза в Мубарекском районе Кашкадарьинской области Узбекистана. Абдиев Т.А., Усаров Г.Х.,// Инфекция, иммунитет и фармакология”. Ташкент-2019г. Стр.45
7. INTRAVENOUS LASER BLOOD IRRADIATION IN THE COMPLEX TREATMENT OF PATIENTS WITH CUTANEOUS LEISHMANIASIS //FA Makhmudov, OB Raxmatov, II Latipov, MK

Rustamov, GS Sharapova

湖南大学学报 (自然科学版) 48 (9)

8. OBSERVATION OF IMMUNOLOGICAL CHANGES DURING CLINICAL CYCLES OF SKIN LEISHMANIOSIS //MF Axmedovich, SG Samadovna, SS Obidovich //Euro-Asia Conferences 5 (1), 207-211
9. АТОПИЧЕСКИЙ ДЕРМАТИТ: ИММУНОПАТОГЕНЕЗ И СТРАТЕГИЯ ИММУНОТЕРАПИИ //ФА Махмудов, ИИ Латипов //Новый день в медицине, 195-200
10. Changes in skin leishmaniasis after local treatment FA Makhmudov, SK Gulomova ACADEMICIA: //An International Multidisciplinary Research Journal 11 (1), 1744-1749.
11. . INTRAVENOUS LASER BLOOD IRRADIATION IN THE COMPLEX TREATMENT OF PATIENTS WITH CUTANEOUS LEISHMANIASIS //FA Maxmudov, OB Raxmatov, II Latipov, MK Rustamov, GS Sharapova  
湖南大学学报 (自然科学版) 48 (9)
12. THE IMMUNOPATHOGENESIS OF ATOPIC DERMATITIS AND STRATEGY OF IMMUNOTHERAPY. //FA Makhmudov, II Latipov. //Новый день в медицине, 53-57
13. Зоонозный кожный лейшманиоз на северной кромке Хорезмского оазиса / Бокштейн Ф. М., Леокка Н. К., Шеремет А. К. и др. // Тез. докл. XII Всесоюзн. конф. по природной очаговости болезней. – Москва, 1989. - С. 29-30.
14. Ким О. Г. Кожный лейшманиоз в Сурхандарьинской области // Вопросы патогенеза и терапии кожных и венерических болезней. – Ташкент, 1990. - С. 130-133.
15. Дергачева Т. И., Жерихина И. И. О внеморальной активности переносчиков возбудителей зоонозного кожного лейшманиоза // Мед. паразитол. и паразитар. болезни. - 1993. - №5. - С. 37-43.
16. ОПТИМАЛЬНЫЕ ПОДХОДЫ К НАРУЖНОЙ ТЕРАПИИ У БОЛЬНЫХ СЕБОРЕЙНЫМ ДЕРМАТИТОМ// ФА Махмудов//Мировая наука, 424-430
17. Зоонозный кожный лейшманиоз в Узбекистане и его профилактика / Шарипов М. К., Раззаков Ш. А., Краснонос Л. Н. и др. // Мед. паразитол. и паразитар. болезни. - 1987. - №1. - С. 39-45.
18. Изоэнзимная идентификация изолятов лейшманий, выделенных от больших песчанок, москитов и больных людей в очагах зоонозного кожного лейшманиоза в Туркменистане / Стрелкова М. В., Елисеев Л. М., Понировский Е. Н. и др. // Мед. паразитол. и паразитар. болезни. - 1993. - №5. - С. 34-37.
19. Cutaneous leishmaniasis: a model for analysis of the immunoregulation by accessory cells / Moll H., Ritter V., Flohe S. et al. // Med. Microbiol. Immunol. - 1996. - Vol. 184. - P. 163-168.