Epidemiological Analysis of Trichofitia Disease in Samarkand Region

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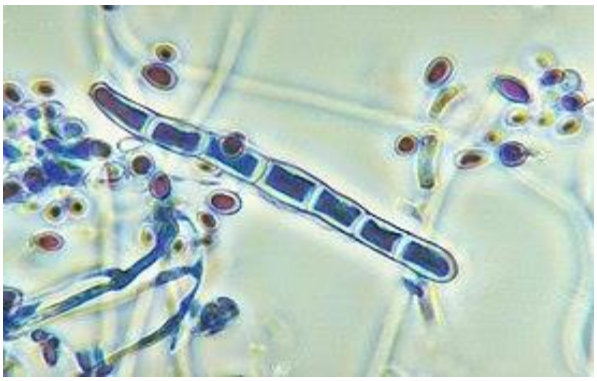
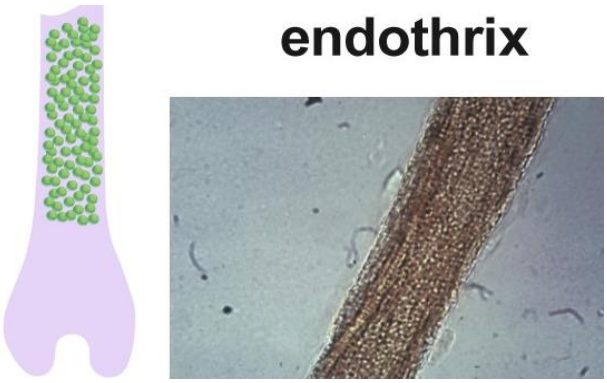
To date, the science knows more than 100,000 species of mushrooms, of which about 500 are pathogens for humans and animals. Mycosis are contagious and rapidly spreading, especially among children. The disease is transmitted from a sick or diseased animal to a person by contact or by using items contaminated by him.

Trichofitia disease. The pathogens are fungi belonging to the trichofiton family, which are divided into two groups depending on how the hair fiber is damaged.

1. Trichophyton endothrix (endo-in, trix- from Latin - hair), mycelium filaments with spores of the fungus are observed inside the hair and cause superficial trichofitia.
2. Trichofiton ectotrix (ecto-external), fungi parasitize on the surface of the hair rod and cause deep trichothia.

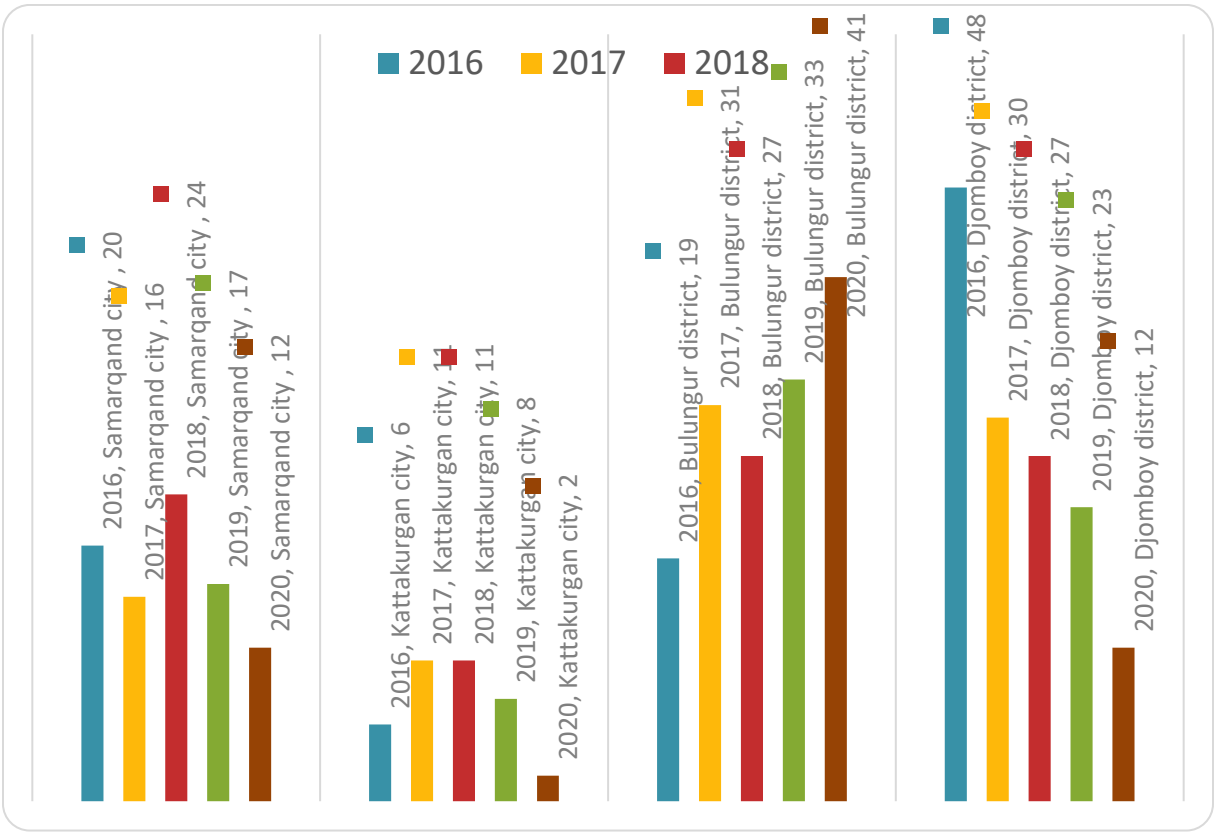




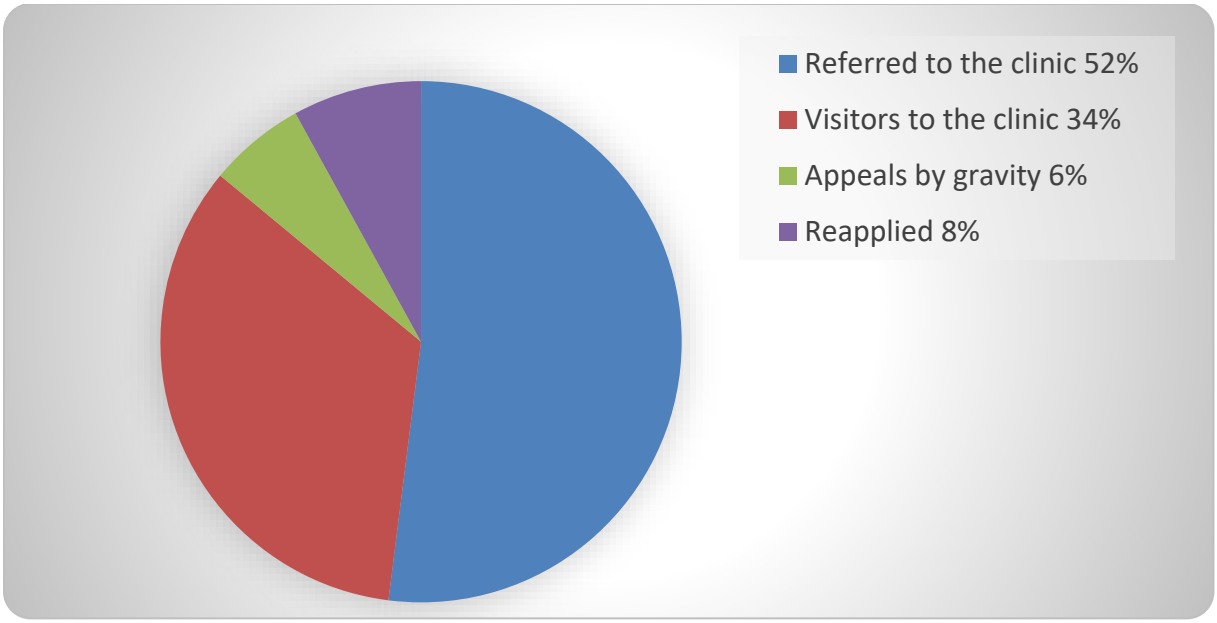
Epidemiology. Surface trichofitia is often transmitted in direct contact with the patient. Pathogenic trichofitons can also be transmitted from various objects used by patients with trichothytis : combs, headgear, etc. Most often children get sick, they are infected from relatives who have been suffering from chronic trichofitia for years. And deep, festering-infiltrating (purulent) trichofitia is transmitted mainly from pets (cattle, sheep, goats, horses, pigs, rodents, mice, rats). According to the data collected, the incidence of trichofitia in endemic areas of Uzbekistan has increased significantly over the past five years. In view of the increase in morbidity among the population of the Republic, epidemiological analysis of the detection and spread of this disease should be carried out annually in order to ensure timely control and prevention of the disease.

According to recent studies, in the Central Asian republics, including Uzbekistan, there has been an increase in the incidence of zooanthropocentric trichofitia among the population in recent years. The main pathogens of zooanthroponosis trichophyton verrucosum and Trichophyton mentagrophytis var. gypseum, whose incidence varies from region to region and within countries. The morbidity rate for the past five years in the Samarkand region is presented below.

Incidence of trichotitis in Samarkand in 2016-2020.



Dynamics of the appealability of patients with trichophytosis



Research Relevance: Due to the unfavourable epidemiological and sanitary situation in different countries of the world, as well as the deteriorating social situation among dermatovenerologists and health care organizers, many prevalence issues become topical, Etiology, clinical current treatment and prevention of zooanthroponic mycosis, including trichofitium. In recent years, many researchers have noted some changes in the clinical flow of zooanthropocentric trichothium, the appearance among them of atypical forms. In the pathogenesis of zooanthroponosis trichofitia, along with adverse environmental and metabolic factors that reduce the normal physiological protective function of the skin, great importance is attached to immunological disorders and changes in non-specific resistance. Despite the fact that many different types of effective modern antifungal drugs have been developed for the treatment of trichofitia and on their basis various methods of treatment have been proposed, the problems of treatment of trichofitia are still relevant. Therefore, prevention of fungal skin diseases is now considered more urgent.

Disease surveillance according to living conditions

№	Samrkand's Region	Number of patients living in satisfactory living conditions (5 years)	Number of patients living in moderately satisfactory living conditions (for 5 years)	Number of patients living in difficult living conditions (within 5 years)

1	Samarqand city	21	44	25
2	Kattakurgan city	16	10	3
3	Bulungur district	11	44	104
4	Djomboy district	5	51	84

Materials and methods: Data of anamnestic, clinical-epidemiological and laboratory examination of patients with the diagnosis of trichofitium, who turned to the clinic of skin-venereal diseases of the Samarkand region in 2016-2020. It took into account the gender, age, living conditions of patients, as well as the localization of the pathological process on the skin, their number, the area occupied and the duration of the process. We also used data from the official report of the Uzbekistan Sanitary and Epidemiological Agency.

City and areas	Trichophytosis									
	2016 year	%	2017 year	%	2018 year	%	2019 year	%	2020 year	%
Samarkand city	20	3,8	16	3,1	24	4,5	17	3,1	12	2,2
Kattakurgan city	6	7,7	11	12,7	11	12,6	8	9,1	2	2,2
Bulungur district	19	11,1	31	17,6	27	15,1	33	18,1	41	22,1
Djomboy district	48	30,8	30	16,9	27	16,5	23	13,7	12	6,9
Ishtikhan district	23	9,9	38	16,0	32	13,2	28	11,3	21	8,3
Kattakurgan district	55	21,8	70	27,3	75	28,6	17	6,2	18	6,6
Narpay district	32	16,2	30	14,8	35	17,1	11	5,2	11	5,2

Nurabad district	42	30,3	48	32,6	42	29,2	34	2,3	49	32,7
Okdarya district	36	24,5	36	24,1	37	24,2	38	24,4	39	24,6
Payariq district	30	13,1	25	10,7	70	29,3	28	11,4	44	17,6
Pastdargom district	58	17,8	53	15,9	79	23,3	50	14,5	37	10,4
Pakhtachi district	34	25,3	30	19,1	29	20,9	24	16,9	29	19,5
Samarkand district	27	11,6	28	11.8	32	13,3	25	10,1	20	7,7
Taylak district	23	12,5	26	13.8	22	11,5	28	14,3	14	6,9
Urgut district	40	8,7	41	8,7	39	80,2	33	6,7	18	3,5
Kushrabad district	27	22,4	22	17,8	20	15,9	9	7,0	13	9,9
On the area	520	14,5	535	14,6	601	16,2	406	10,7	380	9,8

By rash area

№	Samarkand's regions	Rash area	Time from onset to treatment
1	Samarkand city	1-3 cm^2	1-2 weeks.
2	Kattakurgan city	1-3 cm^2	1-3 weeks .
3	Bulungur district	9-13 cm^2	1-3 month
4	Djombay district	10-20 cm^2	2-3 months

Results and discussion. In the period from 2016 to 2020, the regional dermatovenereological dispensary registered 418 patients with the diagnosis of trichofitia and patients aged from 3 to 82 years. The average age of 26 years. In the city of Samarkand in 2016-2020, 89 patients were registered with trichophytis, of which 62

patients, respectively 27 from cattle. Of these, 41 are men and 48 are women, including 8 children. The average age was 36. In terms of living conditions, the distribution of patients was as follows: material and living conditions satisfactory to 21 patients, average satisfactory to 44 patients, difficult living conditions for 25 patients. The area of pathological process on the skin averaged 5-10 cm 2 , the number of hearths from 1 to 3, the duration of the process on average 1-2 weeks. In 2016-2020 in Kattakurgan 38 patients with trichothytis were registered, 29 of them were infected with trichofitia, respectively 9 from cattle. The number of patients with trichofitia increased by 1.5%. 16 men and 22 women, including 5 children. The average age was 29. The distribution of patients according to their living conditions was as follows: 16 patients have satisfactory living conditions, 10 have average living conditions and 3 have difficult living conditions. The area of pathological process on the skin averages 3-7 cm 2 , the number of hearths from 1 to 3, the duration of the process on average 1-3 ned. In the Bulungur district for 2016-2020,151 patients with confirmed trichotitia were registered, 36 of them contracted from patients with trichotitia, respectively 115 from cattle. 37 men and 112 women, including 41 children. The average age was 21. According to housing conditions, the distribution of patients was as follows: material and living conditions were satisfactory - 11 patients, average and satisfactory living conditions - 44 patients, difficult living conditions - 104 patients. The area of pathological process on the skin averaged 15-20 cm 2 , the number of hearths from 9 to 13, the duration of the process on average 1-3 months. In the Zhombo region, between 2016 and 2020,140 patients were registered with the diagnosis of trichofitia, of whom 19 were infected with trichofitia, respectively 121 from cattle. 21 men and 119 women, including 52 children. The average age was 22. In terms of living conditions, the distribution of patients was as follows: material and living conditions were satisfactory - 5 patients, average and satisfactory living conditions - 51 patients, difficult living conditions - 84 patients. The area of pathological process on the skin averaged 13-18 cm 2 , the number of hearths from 10 to 20, the duration of the process on average 2-3 months. Of the 127 men, 291 were women. Of the 418 confirmed cases, 127 were urban residents and 291 were distributed among people living unevenly in the district centers of the region and surrounding districts. Most of the sick from the countryside show characteristic features of the development of courtyards of local residents, in particular, large yard houses with earthen walls, extension to the main buildings of buildings for cattle and small cattle, cultivated fields with aryks, Ponds that serve as water supplies in some courtyards are due to its existence. There were only four family cases in five years, two of which involved all family members (3-5)In the analysis of appeals to the dermatovenerological dispensary of the Samarkand region, it was found that 52 per cent of patients were sent from the Samarkand region to confirm the initial diagnosis, 34 per cent of patients had previously contacted the dispensary for other reasons, 6 per cent of patients turned

themselves, And only 8% of patients came back.

Incidence of dermatomycosis in 2016 in Samarkand region

city/ location	microsporia				Trichophytosis				Mycosis of the feet				Onychomycosis			
	Abs	Int	Children	%	Abs	Int	Children	%	Abs	Int	Children	%	Abs	Int	Children	%
Samarkand city					20	3,8	1	5,0	79	15,2			82	15,7		
Kattakurgan city					6	7,7	4	66,6	21	24,8			4	4,7		
Bulungur district					19	11,1	10	52,6	20	11,6			16	9,3	3	18,7
Djombay district	24	15,4	8	33,3	48	30,8	18	37,5	22	14,1	7	31,8	26	16,7	4	15,4
Ishtikhan district					23	9,9	15	65,2	18	7,7			12	5,2		
Kattakurgan district	3	1,2			55	21,8	24	43,6	16	6,4	4	25,0	17	6,7	3	17,6
Narpay district	5	2,5			32	16,2	12	37,5	11	5,6			12	6,1		
Nurabad district	2	1,4	1	50,0	42	30,3	17	40,5	12	8,6			10	7,2		
Okdarya district	3	2,0	3	100,0	36	24,5	21	58,3	30	20,4	4	13,3	14	9,5	2	14,3
Payaryk district					30	13,1	14	46,6	11	6,1	5	35,7	12	5,2	1	8,3
Pastdargom district					58	17,8	27	46,5	41	12,6			13	3,9		
Pakhtachi district					34	25,3	8	23,5	15	11,5	3	20,0	16	11,9	3	18,7
Samarkand district					27	11,6	10	37,0	25	10,7			15	6,5		
Tailak district	4	2,2			23	12,5	14	60,8	28	15,2	6	26,1	28	15,2	4	14,3

Urgut district					40	8,7	15	37,5	24	5,2	3	12,5	14	3,0	2	14,3
Kushrabad district					27	22,4	17	62,9	12	9,9			10	8,3		
By region for 2016 year	41	1,1	12	31,6	520	14,5	227	43,6	385	10,7	32	8,2	301	8,4	22	7,3
By region for 2015 year	43	1,2	12	27,9	558	15,8	238	42,9	380	10,8	31	8,1	283	8,1	21	7,4

Incidence of dermatomycosis in 2017 in the Samarkand region

city/ location	microsporia				Trichophytosis				Mycoses of the feet				Onychomycosis			
	Abs	Int	Children before	%	Abs	Int	Children before	%	Abs	Int	Children before	%	Abs	Int	Children before	%
Samarkand city					16	3.1	8	50,0	60	11,5			20	3,8		
Kattakurgan city	2	2,3	2	100	11	12.7	9	81,8	17	17,4	1	5,8	5	5,8		
Bulungur district					31	17.6	17	54,8	18	7,9			14	5,7	4	28,6
Djombay district	6	3,7	1	16,6	30	16,9	11	36,6	20	11,9	2	10,0	19	11,3	1	5,3
Ishtikhan district					38	16.0	18	47.4	14	5,9			12	5,1		
Kattakurgan district	3	1,2	1	33,3	70	27,3	37	52,8	15	5,8	15	100,0	15	5,8	2	13,3
Narpay district					30	14.8	13	43,3	12	5,9			10	4,9		

Nurabad district	1	0,7	1	100	48	32,6	17	36,9	14	7,1	3	21,4	11	7,8		
Okdarya district					36	24,1	18	50,0	20	11,4	5	25,0	15	6,7	2	13,3
Payaryk district	2	0,8	1	50,0	25	10.7	8	31,8	14	5,9	3	21,4	11	4,7		
Pastdargom district					53	15.9	28	52,8	16	4,5			14	3,6		
Pakhtachi district					30	19,1	9	26,9	12	7,3			17	10,9	3	17,6
Samarkand district					28	11.8	9	32,1	22	8,4	4	18,1	15	5,5	2	13,3
Taylak district	1	0,5			26	13.8	11	22,2	31	11,2	7	22,6	27	11,2	6	22,2
Urgut district	2	0,4			41	8,7	17	41,9	15	2,7			23	4,7	3	13,0
Kushrabad district					22	17,8	5	23,8	15	9,7			11	8,1	1	9,1
By region for 2017 year	17	0,5	6	35,3	535	14,6	236	44,1	315	8,5	40	12,7	239	6,3	24	10,0

Dermatomycosis morbidity in 2018 in Samarkand region

city/ location	microsporia				Trichophytosis				Mycosis of the feet				Onychomycosis			
	Abs	Int	Children under 12 years	%	Abs	Int	Children under 12 years	%	Abs	Int	Children under 12 years	%	Abs	Int	Children under 12 years	%
Samarkand city	6	1,1	6	100	24	4,5	15	62,5	30	5,6			15	2,8		
Kattakurgan city					11	12,6	5	45,5	23	26,4	2	8,7	5	5,7		

Bulungur district					27	15,1	19	70,4	20	11,2	3	15	15	8,4	2	13,3
Djombay district					27	16,5	13	48,1	18	11,0			14	8,6	2	14,3
Ishtikhan district					32	13,2	15	46,8	21	8,6			9	3,7		
Kattakurgan district					75	28,6	46	61,3	30	11,5			19	7,3	1	5,3
Narpay district					35	17,1	12	34,3	16	7,8			16	7,8	2	12,5
Nurabad district					42	29,2	22	52,4	11	7,6			13	9,0		
Okdarya district					37	24,2	22	59,5	28	18,3	6	21,4	20	13,1	3	15,0
Payaryk district	25	10,5	5	20,0	70	29,3	31	44,3	18	7,5	4	22,2	13	5,4		
Pastdargom district					79	23,3	52	65,8	17	5,0	5	29,4	15	4,4	3	20,0
Pakhtachi district					29	20,9	9	31,0	18	13,0			19	13,7		
Samarkand district					32	13,3	16	50,0	19	7,8	4	21,1	13	5,4	1	7,7
Taylak district	2	1,0			22	11,5	6	27,3	32	16,7	9	28,1	22	11,5	7	31,8
Urgut district	2	0,4	1	50,0	39	80,2	18	46,2	19	3,9	2	10,5	20	4,2	2	10,0
Kushrabad district	2	1,6			20	15,9	8	40,0	17	13,5	2	11,7	13	10,4	2	15,4
By region for 2018 year	37	0,9	12	32,4	601	16,2	309	51,4	337	9,1	37	10,9	241	6,5	25	10,4

Incidence of dermatomycosis in 2019 in Samarkand region

City/district	TOTALING	Per 100000 population	Of them							
			microsporia		Trichophytosis		Mycosis of the feet		Onycho mycosis	
			abs	children before 12 years	abs	children under 12	abs	children under 12	abs	children under 12
Samarkand city	68	12,6	10	9	17	8	26	2	15	1
Kattakurgan city	44	50,0			8	4	33	3	3	
Bulungur district	60	32,8	1	1	33	9	15		11	
Djombay district	48	28,8			23	8	11		14	
Ishtikhan district	63	26,9			28	13	25	2	10	2
Kattakurgan district	50	18,7			17	11	22	6	11	3
Narpay district	43	20,8			11	1	18		14	
Nurabad district	59	39,7			34	21	13		12	2
Okdarya district	79	50,1			38	21	21	7	20	5
Payaryk district	78	30,1	7	2	28	12	21	-	22	-
Pastdargom district	84	23,5			50	30	16		18	4
Pakhtachi district	62	41,7			24	6	18		20	
Samarkand district	65	25,1			25	7	26	3	14	2
Taylak district	110	55,0	2		28	12	43	11	37	9

Urgut district	77	14,9			33	16	21		23	
Kushrabad district	41	31,5	3	3	9	4	16		13	
TOTALING	1031	26,8	23	15	406	183	345	34	257	28

Incidence of dermatomycosis in 2020 in Samarkand region

Towns/ location	Totaling	On 100000 насе secretions	Of them							
			microsporia		Trichophytosis		Mycosis of the feet		Onycho mycosis	
			abs	Of which, children under 12	abs	Of which, children under 12	abs	Of which, children under 12	abs	Of which, children under 12
Samarkand city	42	7,7	8	5	12	6	12	1	10	
Kattakurgan city	22	24,5			2	2	17		3	
Bulungur district	63	33,8	1	1	41	22	8		13	
Djombay district	33	19,2			12	2	12	2	9	
Ishtikhan district	60	23,7			21	9	27	3	12	3
Kattakurgan district	56	20,6			18	9	26	5	12	4
Narpay district	31	14,6			11	4	12		8	
Nurabad district	82	54,7			49	21	18	3	15	3
Okdarya district	87	54,8			39	26	25	4	23	3
Payaryk district	69	27,6	3	1	44	12	13		9	

Pastdargom district	67	18,7			37	25	14	2	16	3
Pakhtachi district	68	45,7			29	15	20		19	
Samarkand district	52	20,1			20	11	11	1	21	
Taylak district	67	33,4			14	5	31	6	22	4
Urgut district	60	11,6			18	9	22	3	20	2
Kushrabad district	36	27,5	4	4	13	4	9		10	
TOTALING	895	23,1	16	11	380	182	277	30	222	22

Conclusions: Based on the data on the number of patients given above, it has been established that over the past five years in the Samarkand region the disease is more severe with a wide spread in rural areas, and in urban areas the disease is easier. As a result of the analysis of the anamnesis data in our work it has been established that the average age of the patients of trichofity in rural areas is younger than in urban areas. In addition, the number of patients is on a downward trend in 2020. The uneven spread of the disease in different regions is evidently related to the characteristics of social and natural conditions.

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