

On the dermatovenereological service of the Tselinny kray (1962–1963)

Zauresh Nagaibayeva¹, Valeria Kozina², Zinakul Bissembayeva¹, Zhanna Mazhitova^{*3}, Dina Kurbanova³, and Zauresh Saktaganova²

¹ Asfendiyarov Kazakh National Medical University, 050000, 94, Tole Bi str, Almaty, Kazakhstan

² Buketov Karaganda University, 100024, 28, University str, Karaganda, Kazakhstan

³ Astana Medical University, 010000, 49a, Beybitshilik str, Astana, Kazakhstan

Abstract. This article deals with the organization of dermatovenereological services for the population in 1962–1963 in the Tselinny kray. The authors analyze the complex of reasons that led to the weak development of this area of medicine in the northern regions of Kazakhstan. The measures of regional and local executive authorities for the development of medical services for the population are considered. A sharp increase in the population of virgin lands put on the agenda the issues of accelerated development of medical services, the construction of dispensaries, hospitals and clinics. The authors emphasize that the fight against the growth of dermatovenereological diseases caused by the beginning of mass migration of people to the development of virgin and fallow lands became an important area of health development. The authors conclude that notable successes in the development of the dermatovenereological service in the region, however, did not fully solve the emerging problems of disease prevention and treatment, which in turn led to the periodicity of updating this issue.

1 Introduction

The Virgin Land development campaign (1950s–1960s) became a historical project of the twentieth century, a kind of socio-economic breakthrough, during which dramatic changes took place in the economy, education, culture and healthcare of Kazakhstan in a short time [1–11]. The purpose of this article is to study the state of the dermatovenereological service in the Tselinny Kray, to show the reasons for the weak development of healthcare in the first decade of this project, to consider the measures of the regional and local authorities to improve the situation in this matter.

Mass overpopulation in the first decade of the virgin land development campaign, unfavorable living conditions, a shortage of high-quality drinking water and problems in the organization of medical care to the population created conditions for the occurrence of dermatovenereological, gastrointestinal and other infectious diseases [12, 13]. Of particular concern in virgin land areas was the condition with skin diseases and sexually transmitted diseases manifested on the skin. It is not by chance that special attention in the development

* Corresponding author: mazhitova_69@mail.ru

of the dermatovenerological service of the Tselinny Kray began to be paid to the construction of a network of dispensaries, hospitals, offices and training of specialized medical personnel.

2 Materials and Methods

The authors used a set of interdisciplinary methods in the article. This allowed a comprehensive study of the issue of meeting the needs of the population in the dermatovenerological service in the Tselinny Kray. To achieve the final result, scientific methods from various humanities and medical disciplines were used, which is a modern trend in natural and humanitarian research. The main principles in working on the article were objectivity and scientificity, verification and critical analysis.

3 Discussion of the results

3.1 Skin-venereological network and personnel

The existing dermatovenerological network in the Tselinny Kray did not satisfy the greatly increasing needs of the population for medical care. The skin and venereological network of the region consisted of 5 regional dispensaries, of which 3 dispensaries of the 1st category (Tselinograd, Kustanay, Petropavlovsk) and 2 dispensaries of the 2nd category (Pavlodar, Kokchetav). There were 3 municipal venereological dispensaries in the region, of which there were of the 3rd category in Rudny, the 5th category in Ekibastuz and the 6th category in the working village of Maykain. There were 2 district venereological dispensaries in Shchuchinsky and Volodarsky. 2 venereological departments were in Atbasar and Dzhetysay.

In the region there was one fungal hospital with a 50-bed in-patient department in Bayan-Aul district of Pavlodar region in 200 km from Pavlodar, which in the 1st quarter of 1964, by the decision of the regional executive committee, was transferred to Pavlodar district in 20 km from Pavlodar [14].

There were 56 venereological offices in the region, of which there were 13 in urban areas, the rest were in rural areas. Venereological offices in urban areas and mines also served the rural population.

In the districts of the region, skin-venereological beds were part of infectious diseases hospitals, to which skin-venereal patients were hospitalized as needed. There were 11 beds per 100 thousand people in the Tselinny Kray, which was extremely insufficient [14].

69 doctors of dermatology and venereology employed in venereological institutions of the region, of which:

- there were 53 doctors in regional dispensaries;
- there were 7 doctors in city dispensaries;
- there was 1 doctor in the fungal hospital;
- there were 2 doctors in the district dispensaries;
- there was 1 doctor in venereological departments;
- the rest 5 doctors were in the venereological offices.

Out of 56 venereological offices of the region, only 5 venereological offices were staffed by dermato-venereologists (in the Kostanay region – 3, in the Kokchetav region – 1, in the North Kazakhstan region – 1).

Only 20 venereological offices were staffed with paramedics:

- Kokchetav region – 8;
- North Kazakhstan region – 2;

Kostanay region – 4;
Tselinograd region – 4;
Pavlodar region – 2.

In the rest of the venereological offices, part-time doctors worked, most of whom specialized on the basis of regional dispensaries.

It is worth noting that in 1963, after graduating from the medical institute, 2 doctors arrived in the Tselinny Kray: 1 doctor – in the Tselinograd region, 1 doctor – in the Kokchetav region [15]. But, at the same time, 4 doctors left the territory (1 doctor from Kokshetau region and 3 doctors from Tselinograd region). It should be noted that in the Tselinny Kray there was a catastrophic shortage of specialists in dermatology and venereology, and the health authorities made every effort to train medical personnel: they conducted advanced training courses for doctors, specialization courses, monthly courses on skin and venereological diseases, seminars on etiology, clinics, organization of detection and treatment of fungal diseases. But these measures were clearly not enough, since the picture of the morbidity of dermatovenereological diseases did not fundamentally change [16].

3.2 Dynamics of syphilis incidence

In 1963, 67 cases of syphilis of all forms were registered in the Tselinny Kray. In 1962 141 cases were registered, i.e. there was a decrease by 74 cases (52.4%). See Table 1.

Table 1. Incidence of syphilis in the Tselinny Kray.

Name of region	All forms		Syphilis I		Syphilis II fresh		Syphilis II recurrent		Syphilis III active	
	1962	1963	1962	1963	1962	1963	1962	1963	1962	1963
Tselinograd	51	26	5	2	4		1		1	1
Kustanay	39	14	1	2			2			2
North Kazakhstan	29	18	1	1		1				
Kokchetav	19	7			2		4	2	1	
Pavlodar	3	2				1			1	
Total	141	67	7	5	6	2	7	2	3	3

In terms of recurrent syphilis, the Kokchetav region was in the first place. The largest number of cases of all forms of syphilis was registered in the Tselinograd region (26 cases), the smallest was in the Pavlodar region (2 cases). High rates of syphilis in the Tselinograd region were associated with a demographic surge, uncontrolled sexual contacts of young people who came to the virgin lands development, and people's irresponsible attitude to their health [17].

The analysis of the movement of patients with syphilis of all forms in the whole Tselinograd region in the context of districts in absolute numbers compared with 1962 is shown in Table No. 2.

Table 2. The incidence of syphilis in the Tselinograd region.

Name of districts	All forms		Syphilis I		Syphilis II fresh		Syphilis II recurrent		Syphilis III active	
	1962	1963	1962	1963	1962	1963	1962	1963	1962	1963
Tselinograd	18	9	4	1	2					1
Balkashinsky	1									
Derzhavinsky	2									
Yesilsky	1									
Yermentaucky	3	3								

Alekseyevsky	3	2							
Dzhakysynsky	3	3							
Kurgal-dzhinsky	5	2			1				
Astrakhan	6	1			1		1		
Tselinogradsky	9	6	1	1				1	
Total	51	26	5	2	4		1	1	1
City	26	15	4	1	2				1
Village	25	11	1	1	2		1	1	

As can be seen from the table, there was a decrease in the incidence of all forms of syphilis by 25 cases (41%).

At the same time, infectious forms of syphilis were registered in Tselinograd: one case of primary seropositive syphilis and one case of primary seronegative syphilis in the Tselinograd district. It is worth noting that patients with infectious forms of syphilis were hospitalized in the first 24 hours from the moment of diagnosis [18].

3.3 Examination of somatic patients

In 1963, 3,171 patients were serologically examined in two city and regional hospitals in Tselinograd, which was 62%. Among the examined somatic patients, 3 patients with visceral syphilis and 3 people with latent period of syphilis were identified, which was 0.19%.

2,625 people passed through the hospitals of 4 dispensaries (oncological, tuberculosis, neuropsychiatric, skin and venereological), 1,581 were serologically examined, which was 59.5%. 2 patients with latent forms of syphilis were identified, which was 0.13%. It is also worth noting that in district hospitals, all somatic patients were examined for suspected syphilis [14].

Treatment of patients with syphilis was carried out according to the instructions and treatment regimens of 1963 with penicillin, bicillin I–III, bismuth, mercury and iodine preparations. Arsenic preparations were not used in 1963. In total, 96 medical sites in the Tselinograd region treated patients with syphilis, of which 21 medical sites did not accept patients with syphilis due to the lack of doctors

3.4 Prevention of early congenital syphilis

In order to prevent early congenital syphilis, a serological examination of pregnant women was carried out. In 1963, 3,049 pregnant women were registered in the city of Tselinograd, 2,988 were serologically examined, which was 98%. In 2 laboratories of the city of Tselinograd (at the regional skin and venereological dispensary and on transport) and in 2 districts of the region (Atbasarsky, Balkashinsky) and Makinsk, pregnant women were examined by setting the Wassermann reaction, in other districts by setting sedimentary reactions. In 1963, 3,133 pregnant women were examined by the dry serum method. Among them, one patient with latent syphilis was identified [14].

The indicators of serological examination of pregnant women in district centers were 61% (in 1962 – 64%), in district hospitals – 29% (in 1962 – 30.2%).

3.5 The state of gonorrhea control

In 1963, 2,639 cases of gonorrhea were registered in the Tselinny Kray, of which 2,080 cases of acute gonorrhea and 559 cases of chronic gonorrhea were registered. The general trends in the incidence of gonorrhea had socio-economic reasons: the disease was spread

primarily among young people who had promiscuous sexual intercourse, neglect of personal hygiene rules [18]. See Table 3.

Table 3. Comparative data on the incidence of gonorrhoea for 1962–1963 by region.

Name of region	1962						1963					
	gonorrhoea acute			chronic			gonorrhoea acute			chronic		
	city	Village	Total	city	Village	Total	city	Village	Total	city	Village	Total
Kustanay	289	280	519	70	62	132			535			149
Pavlodar	322	156	478	67	36	103	304	147	451	92	48	140
Tselinograd	228	175	403	75	30	105	330	114	444	96	35	131
Kokchetav	175	167	342	36	42	78	180	178	358	27	33	60
North Kazakhstan			343			53			292			79

Such a picture was observed in the center of the Tselimny Kray – the city of Tselinograd. The incidence of gonorrhoea in the region, the city of Tselinograd and in the context of districts for 1963 compared with 1962 is shown in Table No. 4.

Table 4. The incidence of gonorrhoea in the Tselinograd region.

	1962			1963			Tselinograd	Atbasarsky	Derzhavinsky	Balkashinsky	Yesilsky	Yermentausky	Dzhaksynsky	Kurgaldzhinsky	Astrakhan
	city	Village	Total	city	Village	Total									
Gonorrhoea acute	228	175	403	330	114	444	261	44	16	12	16	6	17	12	9
men			358			381	226	40	12	11	14	4	11	11	8
women			65			63	35	4	4	1	2	2	6	1	1
Gonorrhoea chronic	75	30	105	96	35	131	72	20	11	6	3	4		4	
men			4			15	3	6	2					1	
women			101			116	69	20	5	4	3	4		3	

As can be seen from the table, in 1963, compared with 1962, there was a slight increase in both acute and chronic gonorrhoea. Difficulties arose in attracting sources of infection, family members and contacts for gonorrhoea to treatment for 1963. According to the regional dermatovenerologic dispensary, the rate of involvement in the treatment of sources of infection was: for acute gonorrhoea in 1962 – 64%, in 1963 – 62.3%; for chronic gonorrhoea in 1962 – 24%, in 1963 – 25%.

Treatment of gonorrhoea was carried out mainly in the regional dispensary, in venereological departments and venereological offices and medical sites staffed by doctors. It should be noted that in the districts of the region, the connection between the dermatovenerological offices and gynecologists of the districts was not well established, which affected the state of the dermatovenerological service [19].

3.6 Status of dermatomycosis control

In 1963, 472 cases of all forms of dermatomycoses were registered in the region, of which: superficial trichophytosis of scalp – 217, deep trichophytosis of scalp – 68, superficial trichophytosis of smooth skin – 69, deep trichophytosis of smooth skin – 26, chronic trichophytosis of adults – 28, nail trichophytosis – 10, microsporia – 45, scab – 9.

The analysis of the incidence of dermatomycoses in the whole region, by urban and rural settlements, comparison with 1962 in absolute numbers and intensive indicators is shown in Table No. 5.

Table 5. Incidence of dermatomycoses.

	Quantity of dermatomycoses for 1962	Intensive indicator	Quantity of dermatomycoses for 1963	Intensive indicator
By region	701	80.3	472	54.7
By city settlements	298	87.4	186	53.0
By rural settlements	403	75.7	286	56.1

Compared with 1962, there was a decrease in all forms of dermatomycoses by 229 cases, including superficial trichophytosis of scalp by 140 cases, deep trichophytosis of scalp by 21 cases, superficial trichophytosis of smooth skin by 58 cases, microsporia by 11 cases, scab by 12 cases. See Table 6.

Table 6. Extensive indicators on fungal diseases for 1962.

	Total fungal diseases		Trichophytosis		Scab		Microsporia	
	Indicator	%	Indicator	%	Indicator	%	Indicator	%
City	298	100	266	89	3	1	29	9.7
Village	403	100	358	88.8	18	4.4	27	6.6
Total	701	100	624	89	21	2.9	56	7.9

The percentage of patients involved in treatment was 97.2%, the percentage of hospitalization was 79%. The average stay of a fungal patient in the hospital was 43 days.

It should be noted that in 1963, communication was established between skin and venereological institutions and the veterinary service to identify the sources of dermatomycosis. At the beginning of the year, local executive organizations made a decision to combat fungal diseases among public and individual livestock. As a result, 22,122 heads of cattle were treated in the region. This work yielded results and led to a decrease in the number of patients infected with dermatomycosis.

Cases of fungal diseases have also been reported among livestock. The regional skin and venereological dispensary had a journal for registering cases of deep trichophytosis of cattle with an indication of the address. When cases of deep trichophytosis were detected, the veterinary services of the city and districts were informed on the same day about the inspection of livestock and taking measures.

In addition, the sanitary and epidemiological stations of the region carried out final disinfection in the foci by a chamber method (in most cases in a timely manner). Chamber treatment was carried out in Tselinograd, Atbasar, Makinsk, 8 districts of the region; wet treatment (chloramine solution) was carried out in 2 districts (Kurgaldzhinsky, Ermentau) [18].

152 foci of infection were identified, 128 were treated by the chamber method, which was 84%. The remaining foci were treated with a wet method.

The sanitary services of the region conducted the following number of analyses. See Table 7.

Table 7. Results of laboratory tests.

	1962	1963
Cultured	1180	1420
Growth received	320	356
Trichophyton gypseum	52	55
Trichophyton violaceum	111	88
Trichophyton tonsurans	4	2
Trichophyton faviform	6	8
Trichophyton glabrum	22	21
Microsporum canis	14	39
Microsporum ferrugineum	13	6
Achorion	19	4
Epidermophyton Kaufman wolf	96	107
Epidermophyton rubrum	9	4
Yeast-like fungi	296	253
Positive	78	195

Clinical laboratories were available in all district hospitals where tests on Neiser's gonococci and fungi were conducted. It is worth noting that even the laboratories in the center of the Tselinny Kray were not fully provided with dishes, reagents, equipment: there was an insufficient number of test tubes, tripods, graduated pipettes, an electric autoclave, inactivators, reagents for the examination of nutrient media [18]. There was no need to talk about the full equipping of laboratories in other regions of the region. Bacterioscopic and serological examination of cerebrospinal fluid, tests for pale treponema and determination of lupus erythematosus and pemphigus cells, staining of smears for trichomonas by Gram, cultural diagnostics of trichomycosis, epidermophytosis and yeast were performed in the laboratories of the regional dispensary, in Makinsk and Atbasar, in Kurgaldzhinsky and Dzhaksynsky districts. The remaining administrative units of the region were not provided with the necessary equipment for the timely detection of pathogens, which led to a decrease in the pace of combating dermatovenereological diseases and the creation of a difficult epidemiological situation.

4 Conclusion

Based on the above, it should be noted that the main positive aspects in the work of the skin and venereological institutions of the region was that in 1963 there was a slight decrease in

all forms of syphilis by 74 cases or 53%, contagious forms of syphilis by 45%. No cases of early congenital syphilis were registered in the region.

In all regions of the Tselinny Kray, active detection of fungal patients was carried out with the involvement of employees of the general medical network. At the same time, the negative aspects were the growth of acute and chronic gonorrhea, registration of childhood gonorrhea in 3 regions.

The main reason for the registration of a large amount of gonorrhea in the Tselinny Kray (2,639 cases) was explained by the fact that obstetricians and gynecologists of the region did not actively participate in the examination and detection of gonorrhea among gynecological patients. In the districts of the region, the issue of personnel was still unresolved, since in most districts the positions of dermato-venereologists were occupied by part-time doctors and nurses.

Therefore, the employees of the skin and venereological institutions of the region were given the following tasks for the future by the regional health authorities: 100% wassermination of pregnant women and somatic patients in the cities of the regions; a sharp decrease in fungal diseases; treatment of all foci of fungal patients by chamber method and improvement of the quality of sanitary and educational work among the population.

Characterizing the dermatovenereological network in the Tselinny Kray in 1962–1963, it should be emphasized that its development was carried out in difficult socio-economic conditions and had serious drawbacks: incomplete equipment of dispensaries, offices and laboratories (sometimes complete absence in rural areas), lack of highly qualified personnel and other factors led to negative moments and stability of statistics in relation to some diseases.

References

1. Kreindler, *Soviet language planning since 1953 Language planning in the Soviet Union* (London, 1990) https://doi.org/10.1007/978-1-349-20301-7_3
2. G.A. Timofeeva, *Pediatrics Journal named after G. N. Speransky* **56(10)**, 37–42 (1977)
3. T.G. Vereshchagin, *Scientific Journals of OmSTU* **3(119)**, 29–32 (2013)
4. Sh.N. Sayakhimova, *Actual problems of the humanities and socio-economic sciences* **10(1)**, 149–153 (2016)
5. T. Gomart, W. Taubman, *Politique étrangère* **69(1)**, 205–206 (2004)
6. I. Zelenin, *Russian Studies in History* **50(3)**, 44–70 (2012) <https://doi.org/10.2753/RSH1061-1983500303>
7. M. Elie, *Global Environment* **8.2**, 259–292 (2015) <https://doi.org/10.3197/ge.2015.080202>
8. R. Kraemer et al., *Environ. Res. Lett.* **10**, 054012 (2015) <https://doi.org/10.1088/1748-9326/10/5/054012>
9. T. Artamonova et al, *IOP Conf. Ser.: Earth Env. Sci.* **395**, 012118 (2019) <https://doi.org/10.1088/1755-1315/395/1/012118>
10. A.A. Chibilev et al, *Voprosy stepenevedeniya* **5**, 7–11 (2005)
11. E.V. Pakhomova, *RUDN J. of Russian Hist.* **19(3)**, 625–640 (2020) <https://doi.org/10.22363/2312-8674-2020-19-3-625-640>
12. Zh. Mazhitova et al, *Europ. Jour. of Sci. and Theol.* **18(5)**, 105–122 (2022)
13. Z. Saktaganova et al, *European Journal of Science and Theology* **14(1)**, 103–114 (2018)

14. V. Kozina et al, E3S Web Conf. **371**, 06019 (2023)
<https://doi.org/10.1051/e3sconf/202337106019>
15. T.Zh. Zhumasultanov, *Statistics, Accounting and Audit* **4**, 109–119 (2013)
16. C. Beksultanova et al, E3S Web Conf. **284**, 10001 (2021)
<https://doi.org/10.1051/e3sconf/202128410001>
17. Z. Saktaganova et al, E3S Web Conf. **284**, 07020 (2021)
<https://doi.org/10.1051/e3sconf/202128407020>
18. A. Orazbayeva et al, E3S Web Conf. **371**, 06018 (2023)
<https://doi.org/10.1051/e3sconf/202337106018>
19. Z. Nagaibayeva et al, E3S Web Conf. **371**, 06016 (2023)
<https://doi.org/10.1051/e3sconf/202337106016>

Buketov University