



The Analysis of the Assortment of Nootropic Drugs Registered in The Republic of Uzbekistan

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ABSTRACT: This article utilized data from the state registers of registered medications, medical supplies, and medical apparatus in No. 22 of 2018, No. 23 of 2019, No. 24 of 2020, No. 25 of 2021, and No. 26 of 2022 in the Republic of Uzbekistan. On the basis of the received data, a variety of analyses of nootropic medicines registered in the Republic of Uzbekistan were performed.

KEYWORDS: medications, nootropic medications, content analysis, main list tool, assortment tool, pharmaceutical market, enterprise management.

The capacity of blood to clot is a crucial defense mechanism against blood loss-related mortality. Without hemostatic medications, surgery, traumatology, natural disaster medicine, and the treatment of hemophilia are inconceivable [1].

The bleeding from trauma is one of the leading causes of death for individuals aged 1 to 34 worldwide, according to statistics. 30% of fatalities are caused by severe blood loss. Herbs with hemostatic properties have been recognized for centuries. But the problem is nearly impossible to address with medicinal plants; blood loss-related deaths are still observed [2].

The creation and enactment of a wide variety of nootropic drugs that can replace imported drugs is a pressing matter today.

THE PURPOSE OF THE WORK

To examine the content analysis of the assortment of nootropic medications for the years 2018 to 2022 [3].

RESEARCH METHODS

The analysis of the assortment of medications is one of the marketing indicators that determine the potential of the pharmaceutical market [3].

In the process of analysis, the Law of the Republic of Uzbekistan No. 22 of 2018, No. 23 of 2019, No. 24 of 2020, No. 25 of 2021, and No. 26 for 2022 titled “Drugs, medical devices, and state medical equipment registered in the Republic of Uzbekistan from the Registry” and the order of the Ministry of Health of the Republic of Uzbekistan No. 3289 dated March 23, 2021 titled “On approval of the list of essential drugs”.

THE RESULTS AND DISCUSSIONS OF THE RESEARCH

In accordance with the order of the Ministry of Health of the Republic of Uzbekistan No. 3289 of 23.03.2021 “On approval of the list of basic medicinal products”, the nootropic drugs included in this list contain the active ingredients piracetam, gopanthenic acid, citicoline, and memantine hydrochloride.

Table 1. The nootropic preparations in the list of essential medicines

No	International Nonproprietary Names	The forms of the drug
1	Piracetam	tablets
		capsules
		solution for injection
2	Hopantenic acid	capsules, tablets
		syrup



3	Citicoline	solution for injection (administered orally), drop for drinking
		tablets
4	Succinic acid+nicotinamide+inosine +riboflavin sodium phosphate	tablets
		solution for injection
5	Peptide complex	solution for injection
6	Ethylmethylhydroxypyridine succinate	tablets
		solution for injection
7	Piracetam+citicoline	tablets
8	Memantine Hydrochloride	tablets

According to the most recent State Register of Medicines, Medical Products, and Medical Equipment No. 26 of 2022, a total of 206 nootropics have been registered on Uzbekistan’s territory. 73 (35.5%) of these medications are manufactured locally, 71 (34.5%) are manufactured abroad, and 62 (30%) are manufactured in the CIS [4].

The outcomes of a comparison with three-year-old indicators are presented in Table 2. As shown in the data, the number of nootropic drugs imported from abroad and registered by domestic manufacturers increased between 2020 and 2022.

In the following section of our analysis, we compared these results with the 2019 State Register of Medicines, Medical Supplies, and Medical Equipment registered in the Republic of Uzbekistan, No. 23. On the territory of Uzbekistan, 49 names of pharmaceuticals with hemostatic properties were registered in 2019, according to official data. 12 (24.5%) of these medications were produced by local manufacturers, 27 (55.1%) by foreign manufacturers, and 10 (20.4%) by producers from CIS nations [6].

Table 2. The analysis of registration of drugs with nootropic effect in the section of producing countries

Manufacturers	2020		2021		2022	
	quantity	%	quantity	%	quantity	%
Total amount	193	100	199	100	206	100
Producers of the CIS countries	60	31	63	31.6	62	30
Foreign manufacturers	64	33.2	65	32.7	71	34.5
Local manufacturers	69	35.8	71	35.7	73	35.5

As evidenced by the results, the number of nootropic drugs that have passed general registration has increased annually, as has the proportion of nootropic drugs imported from the CIS and abroad. The number of nootropic drugs manufactured by domestic pharmaceutical firms has increased annually. The majority of registered nootropics are produced by domestic and international manufacturers.

Table 3. The analysis of the assortment of drugs with nootropic effect by dosage forms

The forms of drug	2019		2020		2021		2022	
	quantity	%	quantity	%	quantity	%	quantity	%
Total amount	130	100	193	100	199	100	206	100
Injection solution	70	53.9	97	50.3	108	54.3	115	55.8
Tablets	32	24.7	44	22.8	40	20.1	37	18
Capsule	18	13.8	23	12.0	22	11.0	22	10.6
Drops and syrups	6	4.6	26	13.4	27	13.6	30	14.6
Nasal drops	1	0.7	1	0.5	1	0.5	1	0.5
Granule	3	2.3	2	1.0	1	0.5	1	0.5



The results of the analysis of hemostatic medications by drug form are presented in Table 3.

The preponderance of nootropic medications are injectable drugs, according to the data. 50 names of nootropic medications produced and registered by local manufacturers are in injectable form, 10 names are in syrup and drop form, and 13 names are in tablet and capsule form, according to data from the 2022 Register. It was determined that 42 of the pharmaceuticals produced and registered by foreign manufacturers are injectables, 11 are tablets, 11 are syrups and drops, and 7 are capsule-based medications.

In the following segment of our analysis, we examined the registration of nootropic drugs in the section of producing nations. According to the results of the analysis, Uzbekistan, Russia, India, and Ukraine produced and registered the most nootropic medications. The analysis results are presented in Table 4.

Table 4. The distribution by producing countries of nootropic drugs registered in the State Register of the Republic of Uzbekistan

List of the producing country	The quantity of registered medicines							
	2019		2020		2021		2022	
	quantity	%	quantity	%	quantity	%	quantity	%
Uzbekistan	28	21.6	69	35.9	71	35.8	73	35.5
India	11	8.6	21	10.9	25	12.6	32	15.5
Russia	34	26.3	35	18.2	35	17.6	33	16
Ukraine	13	10	16	8.3	19	9.5	17	8.3
Belarus	6	4.7	9	4.7	9	4.5	11	5.3
Italy	7	5.8	6	3.1	5	2.5	5	2.4
Austria	4	3.0	2	1.0	2	1.0	2	1
Spain	3	2.3	5	2.6	7	3.5	4	1.9
Pakistan	2	1.5	2	1.0	2	1.0	2	1
China	4	3.0	6	3.1	4	2.0	7	3.4
Turkey	4	3.0	8	4.1	8	4.0	8	3.9
South Korea	1	0.7	5	2.6	5	2.5	4	1.9
Belgium	2	1.5	–	–	–	–	–	–
Latvia	4	3.0	4	2.0	4	2.0	4	1.9
Bulgaria	1	0.7	1	0.5	1	0.5	–	–
Romania	2	1.5	3	1.5	2	1.0	2	1
Egypt	1	0.7	–	–	–	–	–	–
Hungary	1	0.7	1	0.5	–	–	1	0.5
Kazakhstan	1	0.7	–	–	–	–	1	0.5
Armenia	1	0.7	–	–	–	–	–	–
Total:	130	100	193	100	199	100	206	100

Local manufacturers produce and register an increasing number of nootropic pharmaceuticals each year. And the majority of these nootropic medications are injected.

CONCLUSION

As evidenced by the results, foreign-manufactured nootropic drugs led in terms of type and number of drug forms in 2019, while the proportion of nootropic drugs manufactured by domestic pharmaceutical companies increased annually beginning in 2020. The majority of currently available nootropic drugs are registered nootropic drugs produced by domestic and foreign manufacturers.

On the basis of these data, we can conclude that: since 2019, the number and type of nootropic drugs produced by domestic manufacturers have increased, as has the proportion of drugs imported from abroad and the CIS. Currently, 64.5% of nootropic medications on the market are imported from other countries and the CIS. Therefore, it is of the utmost importance for domestic manufacturers to introduce a new pharmacological group of nootropic drugs and novel drug forms.



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