Dynamics of the main indicators of the domestic market of official herbal preparations in the first decade of the XXI centuryT.G.

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Dynamics of key figures of the domestic market of officinal plant drugs in the first decade of the twenty-first century

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SUMMARY

The monitoring of the segment of herbal preparations of the domestic pharmaceutical market in the first decade of the XXI century was carried out. The main trends in the formation of the assortment of official drugs were revealed: an increase in the number of registered herbal preparations, on average by 14.4% every 2 years (with the outstripping growth of domestic drugs - by an average of 16.7% every 2 years), the prevalence of domestic drugs over foreign ones in 11.2 times and the share of medicinal plant raw materials (40.8%) over finished preparations in different dosage forms
- solid (24.9%), liquid (28.8%) and soft (5.5%), etc. The obtained research results make it possible to scientifically substantiate the directions and prospects of pharmacognostic and technological research to expand the range of modern herbal preparations and optimal drug supply consumers, taking into account the peculiarities of modern pharmacotherapy and the proposals of pharmaceutical manufacturers.

Key words: official herbal preparations, herbal medicines,assortment of herbal preparations, pharmaceutical market, herbal medicinal raw materials, dosage forms.

RESUME

The monitoring of herbal preparations segment of the domestic pharmaceutical market in the first decade of the twenty-first century was conducted. We identified key trends shaping assortment of officinal medicines: growth in the number of registered herbal preparations, an average of 14.4% every 2 years (with faster growth of domestic products - an average of 16.7% every 2 years), the prevalence of domestic products over foreign in 11.2 times, and the proportion of medicinal raw materials (40.8%) above the finished formulations in various dosage forms - solid (24.9%), liquid (28.8%) and soft (5.5%), etc.

Keywords: officinal herbal preparations, herbal medicines, range of herbal preparations, pharmaceutical market, medicinal raw materials, dosage forms.

More and more scientific publications indicate positive growth trends in the consumption of herbal preparations in the world market. Today, just under half of the world's pharmaceuticals are made from medicinal plants. According to WHO experts, in the coming decades, the share of herbal medicines (drugs) (synonym: herbal medicines (LRP) [11], phytopreparations, phytopharmaceuticals, etc.) in the total volume of drug consumption will reach 60% [1, 9]. At the beginning of the second decade of the 21st century, practitioners and the public no longer need to prove the feasibility, effectiveness and safety of prevention and treatment of diseases and syndromes using official standardized herbal medicines.

Studying the dynamics of the main indicators of the pharmaceutical market and identifying trends in its formations serve as the basis for optimal drug supply to consumers, taking into account the characteristics of modern pharmacotherapy and the proposals of manufacturers of pharmaceutical products [2, 4]. Monitoring studies today are a necessary component of pharmacoepidemiology, which studies the characteristics and trends of drug consumption [10], including those of plant origin [5].

The purpose of this study was to study the trends in the formation of the assortmentof official pharmaceutical products in the domestic pharmaceutical market.

The objects of research were official sources of information, in particularState registers of drugs (2006, 2008 and 2010), which are a dynamic system of legal and regulatory and technical documentation on drugs that have passed state registration in accordance with the established procedure [3].

Research methods: content analysis, observation, systematization, variation statistics,grouping, ranking, comparative and structural analysis.

In the design of the study, we included the quantitative and qualitative characteristics of the breadth of the assortment, incl. number (total) of medicinal products by production (domestic and foreign), by composition (monocomponent and complex), by types of dosage forms (DF), by pharmacotherapeutic action, by plant species, by registration time. The assortment was monitored on the basis of the LRP information array obtained as a result of the content analysis of the State Register (GR) of different years of publication on the basis of biologically active substances from herbal raw materials (medicinal plants) contained in drugs.

Research results

The results of monitoring the assortment of medicinal products for 2006–2010. are summarized in table. 1. One nomenclature item indicated in the GR, taking into account the LF of the drug, was taken as a unit of LRP. Table 1 includes: absolute indicators of assortment (columns 3, 4, 7), absolute (columns 5, 8) and relative $t_{\%}$ (col. 6, 9) indicators of changes, average values of the assortment of LRS for every two years during the entire observation period (2006, 2008, 2010) (col. 10), average increase in percentage $t_{Wed\%}$ (col. 11), the number of registered LPRs for the period 2006–2010. (taking into account unique new drugs and excluded from the GR during this period) (col. 12)

Table 1

Monitoring of the herbal medicines segment on the Russian pharmaceutical market (2006–2010)

№ п/п	Показатели ассортимента ЛРП	2006	2008	Δ	t_1%	2010	Δ	t_2%	Среднее 2006–2010	$t_{ср}$%	Всего 2006–2010
1	2	3	4	5	6	7	8	9	10	11	12
1	**Лекарственные препараты, всего**	3198	3494	296	9,2	4181	687	19,7	3624,3	14,4	4822
1.1	Отечественные	2866	3216	350	12,2	3900	684	21,3	3327,3	16,7	4404
1.2	Зарубежные	332	278	-54	-16,3	281	3	1,1	297,0	-7,6	418
1.3	Монокомпонентные	2485	2762	277	11,1	3391	629	22,8	2879,3	16,9	3850
1.4	Комплексные	713	732	19	2,7	790	58	7,9	745,0	5,3	972
	Доля, в %										
2	**Лекарственные препараты, всего**	100,0	100,0	–	–	100,0	–	–	100,0	–	100,0
2.1	Отечественные	89,6	92,0	2,4	–	93,3	1,3	–	91,6	–	91,3
2.2	Зарубежные	10,4	8,0	-2,4	–	6,7	-1,3	–	8,4	–	8,7
2.3	Монокомпонентные	77,7	79,0	1,3	–	81,1	2,1	–	79,3	–	79,8
2.4	Комплексные	22,3	21,0	-1,3	–	18,9	-2,1	–	20,7	–	20,2
3	**Торговые названия, всего**	925	906	-19	-2,0	975	69	7,6	935,3	2,8	1091
3.1	Отечественные	709	718	9	1,3	787	69	9,6	738,0	5,4	823
3.2	Зарубежные	216	188	-28	-13,0	188	–	–	197,3	-14,0	268
	Доля, в %										
4	**Торговые названия, всего**	100,0	100,0	-	–	100,0	–	–	100,0	–	100,0
4.1	Отечественные	76,6	79,2	2,6	–	80,7	1,5	–	78,9	–	75,4
4.2	Зарубежные	23,4	20,8	-2,6	–	19,3	-1,5	–	21,1	–	24,6

The values of the indicators were calculated using the formulas: (1): $\Delta = y_t - y_p$;

(2): $t_{\%} = (\Delta x 100) / y_p$;

(3): $t_{Wed\%} = (t_1 + t_2) / 2$,

where: Δ (delta) is the absolute change in the indicator, y_t - current indicator, y_p - previous indicator.

1. Analysis of the breadth of the assortment. Statistical analysis of the data table.1 allowed to install the following trends in the development of the target segment of the domestic pharmaceutical market - LRP - for a five-year

period (2006–2010):

1.1. Constant growth in the number of registered LRPs, on average by 14.4% every 2 years. V In general, during the study period, the number of registered LPRs increased by 1.3 times: from 3198 (2006) to 4181 (2010). In total, over the years, the GR included 4822 positions.

1.2. The predominance of domestic LRPs (on average 3327.3 positions for the period 2006–2010) over foreign (297.0) in quantitative terms by 11.2 times.

1.3. Growth in the number of registered domestic LPPs by an average of 16.7% every 2 years: from 2866 in 2006 to 3920 in 2010. In total, over these years, the GR included 4404 domestic LPPs. In relative (percentage) terms, the share of domestic LPPs averaged 91.6% and increased from 89.6% to 93.3% during the study period.

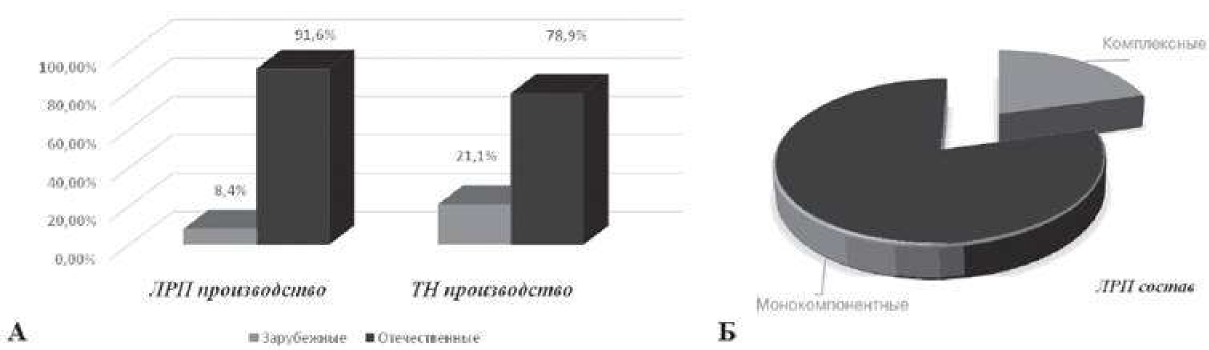
1.4. Decrease in the number of foreign LPOs during the study period by an average of 7.6%: from 332 positions up to 281. In total, the GR included 418 positions. The share of foreign LPOs in the total number of LPOs also tended to decrease: from 10.4% in 2006 to 6.7% in 2010. On average, for the period under study, their share was 8.4%.

1.5. Growth in the number of monocomponent LRS by 1.36 times (from 2485 to 3391) with an increase every 2 years by an average of 16.9%. The share of monocomponent LRS prevails in the structure (79.3%) and tends to grow slightly from 77.7% to 81.1% over the period.

1.6. A slight increase in the number of complex LRS: with an average growth rate of 5.3% - from 713 to 790; a total of 972 names were registered for integrated LRS.

1.7. Decrease in the share of complex LPR from 22.3% to 18.9%. On average for the period, they were about one fifth of the assortment - 20.7%.

Diagrams of the structure of the LRP segment of the domestic pharmaceutical market and their trade names (TN) for the monitored period are shown in Fig. 1.



Rice. 1. The structure of the RLP and TN segment for2006–2010 (%) - A, of the RMP segment for 2006–2010. (%) - B

Table 2 summarizes the results of the analysis of the assortment of LRP (average value over the study period) by the country of origin. During the monitoring period, 297 LPPs of foreign production from 34 countries were registered (included in the GR) (Table 2). The number of offers (items) from one country varies from 1 to 97. In the structure of the foreign assortment, a significant share (one third) of 32.7% is occupied by LRP from Germany. The shares of other countries individually do not exceed ten percent, for example, India - 9.8%, Slovenia - 7.4%. The "other" category (Table 2) includes the following countries: Netherlands - 9%; Austria - 8%; Switzerland and the Czech Republic - 6% each; China - 5%; Georgia, Pakistan, Kazakhstan, Slovakia - 4% each; Denmark - 3%; USA, Bulgaria, Moldova, Peru, Uzbekistan, Romania - 2% each; Hungary, Vietnam, Croatia, Indonesia, Italy, Turkey, Kyrgyzstan, Ireland, Sri Lanka, Iran, Sweden - 1% each. Average indicators (2006–2010) of the number of offers from leading foreign pharmaceutical companies that have registered their LPP in Russia are: BionoricaAG (Germany) - 20; Dr. Theiss Naturwaren (Germany) - 16; KRKA (Slovenia) - 11; Lek (Slovenia) - 12; Unique Pharm.Lab. (India) - 8; Borisov Plant of Medicines (Belarus) - 12; Queisser Pharma (Germany) - 8.

2. Analysis of the assortment of LRP by trade names (TN). From the data table.1 shows that in 2008 the number of TN decreased by 19 (2.0%), but in 2010 increased again by 69 TN (7.6%).

On average, during the study period, the number of TN LRP was 935.3. A total of 1,091 TN were registered.

Similarly to the indicator of the breadth of the assortment of LRS, in the number of consumer goods, there is a tendency for the prevalence of domestic LRS. During the monitoring period, it increased from 709 to 787 with an average growth rate of 5.4%. The number of foreign consumer goods in 2008 decreased by 28 items, reached 188 and remained in the same range in 2010 (average rate of decline - 14.0%). An analysis of relative indicators revealed a similar trend: the prevalence of the share of consumer goods of domestic LRS increased from 76.7 to 80.7% with an average value of 78.9%. The share of TN of foreign LPPs decreased from 23.4% (2006) to 19.3% (2010) and occupies, on average, a fifth of the product mix by TN (21.1%). The ratio of the shares of TN in production in the structure is approximately 3 to 1 (table. 1, column 12).

table 2

Producing countries of herbal preparations represented in the Russian pharmaceutical market in 2006–2010

№ п/п	Страна-производитель	Среднее значение 2006-2010гг.		
		Количество	Доля, %	
1	Россия	3327	91,6	
2	Зарубежные	297	8,4	
	Итого	**3624**	**100,0**	
2.1	Германия	97	32,7	доля из зарубежных
2.2	Индия	29	9,8	
2.3	Словения	22	7,4	
2.4	Украина	20	6,7	
2.5	Польша	20	6,7	
2.6	Франция	19	6,4	
2.7	Беларусь	14	4,7	
2.8	Другие	76	25,6	

3. Analysis of the structure of the assortment of medicinal plants for medicinal plants included in them (GR 2010) is presented in table. 3.

As a result of content analysis of the content of registered medicinal plants (LR), a list of 344 species was compiled (2010). To identify the dominant types of raw materials in LRS, a criterion of 50 LRS and higher was selected. In general, the variations were established from 1 to 310 LRS per plant. 40 dominant LRs (11.6%) were identified, each of which is contained in at least 50 registered LRPs.

From the data table. 3 it can be seen that the TOP-10 is headed by 2 plants - valerian officinalis and peppermint. Further in the ranking are (in descending order): calendula, licorice, chamomile, rose hips, hawthorn, motherwort, yarrow, St. John's wort (in 10th place). More than 150 (from 182 to 310) nomenclature items were identified with the indication of these LRs. Taking into account the content of specific raw material sources in the LRP, a total of 7142 drugs were found, with 4830 drugs (67.6%) accounting for 40 dominant medicinal plants in formulations (11.6% of 344 plants), and only 32 for the remaining 304 plants. 4% of drugs (Table 3).

4. Analysis of the structure of the LRP assortment by groups in accordance with pharmacotherapeutic and ATC classification. In accordance with modern requirements [3], the results of content analysis (2006–2010) are presented by us taking into account the tendencies of growth, stabilization and decrease in the number of positions (Table 4). A total of 52 pharmacotherapeutic groups have been identified, incl. 31 groups with growth trends (59.6%), 10 - with a stabilization trend (19.2%) and 11 - with a downward trend in assortment (21.2%).

Noteworthy is the significant development of the assortment in the TOP-10 groups: in particular, sedative LRP (236 drugs), expectorant (132), diuretic (88), antiseptic and anti-inflammatory (60), cardiotonic (58), antispasmodic (54), anti-inflammatory (52), antimicrobial (34), choleretic (31) and LRP without specifying the group (55). In 21 other groups with the identified growth trend, the assortment increased by 2-26 items.

The next 10 groups with a tendency to stabilize practically do not develop; their assortment is small and amounts to 1-5 positions. In the remaining 11 groups, there is a tendency towards a decrease in the assortment by 1-7 positions: there are no digestive enzyme herbal remedies in the assortment now (-100%), the assortment of LRP for the treatment of prostate, peptic ulcer has decreased by 50%, nephrolithiasis, etc. (Table 4).

5. Analysis by dosage form. The results of monitoring the assortment of LRP by dosage forms (LF) are presented in table. 5. In accordance with the accepted classification by the state of aggregation, solid, liquid, soft DF, medicinal plant raw materials were taken into account separately, and since 2010 - gaseous DF (2 sprays were registered).

The predominant part of the LRP assortment structure (in terms of the relative share,%) falls on raw materials - on average about 40% (up to 40.8% - Table 5, column 10). A quarter of the assortment (24.9%) are solid formulations; about a third (28.8%) are liquid; less than a tenth share (5.5%) - soft; gaseous LF (sprays) were not included in the table. 5, due to the insignificance of their number.

The number of types of medicinal herbal raw materials for the monitoring period tends to increase significantly - on average for every 2 years by 15.6%, but in 2010 its share in the structure decreased by 1.3% (from 42.0% in 2008 to). The absolute figures vary from 1272 positions (2006) to 1701 (2010), with an average of 1480.

Table 3

Dominant herbal medicinal products in official herbal preparations raw materials (GR, 2010)

№ п/п	Лекарственное растительное сырье	Кол-во	№ п/п	Лекарственное растительное сырье	Кол-во
1	Коревища с корнями валерианы	310	21	Корневища аира	89
2	Листья мяты перечной	303	22	Листья или плоды сенны	82
3	Цветки календулы	274	23	Трава вхоща	80
4	Корни солодки (голая, уральская)	272	24	Пихтовое масло, лапки пихты	77
5	Цветки ромашки аптечной	257	25	Цветки бессмертника	76
6	Плоды шиповника	248	26	Листья или побеги толокнянки	76
7	Цветки и плоды оярышника	214	27	Листья или почки березы	70
8	Трава пустырника	199	28	Корневища и корни девясила	69
9	Трава, цветки тысячелистника	184	29	Листья или цветки мать-и-мачехи	69
10	Трава зверобоя	182	30	Плоды перца жгучего	67
11	Листья эвкалипта	149	31	Корнеи алтея	65
12	Листья подорожника	121	32	Плоды или побеги черники	64
13	Листья крапивы	120	33	Трава череды	59
14	Трава душицы	109	34	Трава мелиссы	58
15	Кора крушины	105	35	Почки сосны	58
16	Листья шалфея	97	36	Трава полыни (разные виды)	57
17	Корневища и корни элеутерококка	95	37	Плоды облепихи	51
18	Трава чабреца	93	38	Шишки хмеля	51
19	Плоды кориандра	91	39	Плоды аниса	50
20	Трава эхинацеи пурпурной	89	40	Побеги багульника	50

The number of LRPs produced in solid formulations is increasing with an average increase of 13.5%, but their share in 2010 decreased by 2.6% compared to 2008 (Table 6). The assortment of solid dosage forms includes 14 types: filter bags, the share of which is 32.9% (about a third); fees - 27.6%; tablets - 17.6%; capsules and briquettes, respectively 6.3 and 6.0%; powder - 2.8%; all other solid LFs add up to 6.8%.

Table Figures 7 and 8 show the structures of liquid and soft LF LRS, respectively. Among the liquid DF LRP, the most preferable for the consumer and manufacturer are tinctures, which account for slightly less than half - 43.2%. The extract and solution occupy a little more in the structure a tenth share, respectively 15.2% and 11.9%; the rest of the liquid dosage forms account for a total of 29.7%, and the proportion of some does not exceed 5–10%.

In the structure of soft LF LRP, on average, during the monitoring period, oils prevailed - 40.2% and ointments - 33.2%; the rest of the LF do not exceed a share of ten percent.

6. Analysis of the chronology of registration of LRP. The main share of radars included in the information base research, was officially registered in the period from 2001 to 2010 (60.8%); slightly more than a quarter was registered before 1990 (27.1%); the registration of the remaining 12.1% took place in the period 1991–2000. This testifies to the constant saturation of the market with new drugs produced in the last decade using modern technologies, as well as the systematic re-registration of drugs that have confirmed their effectiveness in meeting the needs of Russian consumers and are in demand in Russia.

The discussion of the results

All over the world, evidence-based herbal medicine is considered an increasingly important and progressively developing section of the prevention and treatment of various nosological forms of diseases [7]. This fact is the rationale for the need to develop innovative strategies for domestic pharmaceutical manufacturers in view of the clear market prospects for LRP.

Table 4

Priority pharmacotherapeutic groups of herbal preparations with dynamics assortment in the process of monitoring 2006–2010.

№ п/п	Фармакотерапевтическая группа ассортимента	Кол-во, год 2006	2010	Разница, Δ	Место, R
I. Тенденция роста					
1	Седативные	247	483	236	1
2	Отхаркивающие	350	482	132	2
3	Диуретические	223	311	88	3
4	Антисептические и противовоспалительное	80	140	60	4
5	Кардиотонические	118	176	58	5
6	Спазмолитические	124	178	54	7
7	Противовоспалительные	106	158	52	8
8	Противомикробные	46	80	34	9
9	Желчегонные	180	211	31	10
10	Слабительные	153	179	26	11
11	Общетонизирующие	188	197	9	16
12	Стимулирующие аппетит	95	106	11	15
13	Гемостатические	66	91	25	12
14	Антисептические	75	87	12	14
15	Местнораздражающие	71	80	9	16
16	Потогонные	52	68	16	13
17	Стимуляторы репарации тканей	47	52	5	19
18	Гепатопротекторные	17	26	9	16
19	Противовирусные	21	26	5	19
20	Венотонизирующие	16	21	5	19
21	Обволакивающие	17	25	8	17
22	Ангиопротекторные	16	20	4	20
23	Противогеморроидальные	10	18	8	17
24	Фотосенсибилизирующие	10	15	5	19
25	Вяжущие	114	118	4	20
26	Гипогликемические	34	38	4	20
27	Антидепрессанты	7	11	4	20
28	Для лечения эктопаразитов	4	10	6	18
29	Противоклимактерические	4	8	4	20
30	Противодиарейные	0	2	2	21
31	Без указания группы	456	511	55	6
II. Тенденция стабилизации					
32	Бронходилятирующие	3	3	–	–
33	Аналептические	3	3	–	–
34	Антикоагулянтные	5	5	–	–
35	Противоконгестивные	3	3	–	–
36	Гипотензивные	3	3	–	–
37	Гиполипидемические	3	3	–	–
38	Для лечения заболеваний носа	2	2	–	–
39	Антигистаминные	1	1	–	–
40	Вспомогательные средства	2	2	–	–
41	Симпатомиметические	1	1	–	–
III. Тенденция снижения					$t_{сниж}$,%
42	Поливитаминные	78	74	-4	-5,1
43	Иммуностимулирующие	51	45	-6	-11,8
44	Гипоазотемические	30	26	-4	-13,3
45	Антигельминтные	18	12	-6	-33,3
46	Для лечения простаты	14	7	-7	-50,0
47	Дерматопротекторные	10	6	-4	-40,0
48	Для лечения пептической язвы	6	3	-3	-50,0
49	Для лечения нефролитиаза	2	1	-1	-50,0
50	Пищеварительные ферментные средства	1	0	-1	-100,0
51	Ветрогонные	8	7	-1	-12,5
52	Адаптогенные	6	5	-1	-16,7

Table 5

Monitoring the development of the assortment of official herbal preparations on the Russian pharmaceutical market in 2006–2010. by types of dosage forms

№ п/п	Лекарственные формы	2006 г	2008 г	Δ	$t_{\%}$	2010 г	Δ	$t_{\%}$	сред. 2006–2010 гг.	сред. $t_{\%}$
1	Сырье	1272	1468	196	15,4	1701	233	15,9	1480	15,6
2	Твердые	778	926	148	19,0	1000	74	8,0	901	13,5
3	Жидкие	953	902	-51	-5,4	1275	373	41,3	1043	18,0
4	Мягкие	195	198	3	1,5	203	5	2,5	199	2,0
5	Спреи	-	-	-	-	2	2	-	1	–
	Всего	3198	3494	296	9,2	4181	687	19,7	3624	14,4
	Доля %									
1	Сырье	39,8	42,0	2,2	-	40,7	-1,3	–	40,8	–
2	Твердые	24,3	26,5	2,2	-	23,9	-2,6	–	24,9	–
3	Жидкие	29,8	25,8	-4,0	-	30,5	4,7	–	28,8	–
4	Мягкие	6,1	5,7	-0,4	-	4,9	-0,8	–	5,5	–
5	Спреи	-	-	-	-	-	-	–	–	–

Table 6

The structure of the assortment of solid dosage forms of herbal preparations for the period monitoring (2006–2010)

№ п/п	Твердые лекарственные формы	Среднее значение 2006–2010 гг.	
		Количество	Доля, %
1	Фильтр-пакет	296	32,9
2	Сбор	249	27,6
3	Таблетки	159	17,6
4	Капсулы	54	6,0
5	Брикеты	57	6,3
6	Порошок	25	2,8
7	Другие (гранулы, пастилки и т.п.)	61	6,8
	Итого	901	100,0

Table 7

The structure of the assortment of liquid dosage forms of official herbal preparations (2006–2010)

№ п/п	Жидкие лекарственные формы	Среднее значение 2006–2010 гг.	
		Количество наименований растительных препаратов	Доля, %
1	Настойки	451	43,2
2	Экстракты	158	15,2
3	Растворы	124	11,9
4	Сиропы	97	9,3
5	Капли	84	8,1
6	Эликсиры	88	8,4
7	Другое (лосьоны, бальзамы, соки и т.п.)	41	3,9
	Итого:	1043	100,0

Table 8

The structure of the range of soft dosage forms of RLP for the monitoring period 2006–2010.

№ п/п	Мягкие лекарственные формы	Среднее значение 2006–2010гг.	
		Количество	Доля, %
1	Масла	80	40,2
2	Мази	66	33,2
3	Гели	17	8,6
4	Суппозитории	19	9,5
5	Линименты	11	5,5
6	Другое	6	3,0
	Итого	199	100,0

Our monitoring analysis of the assortment of the target segment of the Russian pharmaceutical drug market in the first decade of the XXI century allows us to give it a satisfactory assessment. Positive trends in the growth of a number of its most important quantitative and qualitative parameters were revealed, for example, the number of registered LRP and TN in general, as well as LRP of domestic production, monocomponent drugs, DF spectrum, pharmacotherapeutic range and types of initial medicinal plant materials.

The necessity of discussing the problematic aspects of the development of the assortment of LRP in terms of scientifically grounded determination of professional prospects for manufacturers of phytoproducts, scientists and practitioners: representatives of pharmacognostic science and pharmacy workers, ensuring the satisfaction of consumer demand. In particular, in spite of the tendency of growth in the assortment of LPP offers on the part of manufacturers, in the modern Russian market their share of the total number of drugs is only about 20% (3.6 thousand from 18 thousand drugs).

The upward trend in the number of domestic LPPs on the market is optimistic. Nevertheless, to date, the share of medicinal herbal raw materials in the total volume of medicinal products on the domestic market is still high, compared with the share of modern standardized herbal preparations. World experts recognize the good quality of wild-growing domestic raw materials due to the high content of biologically active substances, due to a favorable combination of climatic and geographical factors. However, in order to obtain ready-made standardized pharmaceutical products from it, it would be advisable for domestic manufacturers to pay attention to the development of modern galenic and capsule technologies for obtaining LDP, the production of filter bags and tablet forms, as well as to the development of modern methods of end-to-end standardization of drugs and raw materials.

Our monitoring of the assortment structure by type of DF allowed us to reveal the presence of a wide range of LRP in various DF, which allows practitioners and consumers to select drugs in accordance with their preferences and tactics of the treatment process [8]. The possibility of such a choice today is due to both modern scientific developments and the level of technical equipment of pharmaceutical manufacturers.

An important role in the problem of drug supply is played by marketing research, during which it is possible to clarify the wishes and preferences of the consumer. According to our data, the modern consumer prefers a comfortable drug intake. For example, to make infusions and decoctions from packaged medicinal plant materials, you need to know the preparation technology, have free time and utensils for arranging a water bath, which often repels the consumer from the hassle of preparing water extracts at home. Therefore, it is more preferable today for him solid LRP - tablets, capsules and filter bags for obtaining aqueous extracts from medicinal plant materials and fees [6]. The idea of organizing herbal bars in pharmacies and health resorts seems to us very promising,

As a result of the research carried out, we were able to identify only 40 medicinal plants preferred by pharmaceutical manufacturers to obtain finished products from them. Of these 40 dominant (most studied) raw materials, the main part of LRP is obtained, which is used for the prevention and treatment of a wide range of diseases: cardiovascular, neurological, gastrointestinal, upper respiratory tract, etc. Preparations from popular plants have a guaranteed demand and are well purchased population. At the same time, it is expedient, in our opinion, to study both the official and traditionally used raw materials in order to constantly expand the arsenal of drugs for the treatment of nosological forms of diseases, the pharmacotherapy of which has not yet been provided by LRP.

conclusions

1. Conducted content analysis of the range of official drugs (in the first decade of the XXI century) made it possible to reveal the predominance of domestic herbal preparations on the pharmaceutical market (on average 91.6%) over foreign (8.4%) by 11.2 times. In the structure of the foreign assortment, LRP from Germany make up one third (32.7%); the shares of other countries individually do not exceed 10%.

2. Monitoring of the assortment of herbal medicines made it possible to establish a constant increase in the number of registered by LPP, on average by 14.4% every 2 years, with outstripping growth of domestic

drugs - an average of 16.7% every 2 years.

3. During the study period, the number of LPRs registered in Russia increased by 1.3 times, and the share of domestic ones on average increased from 89.6% in 2006 to 93.3% in 2010, and foreign ones, respectively, decreased from 10.4% to 6.7%. A similar trend was found for the trade names of the LRP.

4. It has been established that in total as raw materials for the production of official LRP 344 species of medicinal plants are used (GR, 2010), of which 40 (11.6%) are dominant (included in 50 and more drugs), and the TOP-10 is headed by 2 plants - valerian officinalis (in 310 LRP) and peppermint (in 303 LRP).

5. It has been shown that medicinal plant raw materials (40.8%) with a trend of significant growth - on average for every 2 years by 15.6%. A quarter of the assortment (24.9%) are solid formulations - with an average increase of 13.5%; about a third (28.8%) are liquid; less than a tenth (5.5%) - soft.

6. Identified trends in the studied segment of the domestic pharmaceutical market allow to scientifically substantiate the directions of pharmacognostic and technological research to expand the range of pharmaceutical products.

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