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Analysis of the assortment cholagogue.

Y. Abramova .

The Siberian state medical university, Tomsk (Russia)

According to statistics the diseases of the digestive tract take fifth place in the Russian Federation population death [5]. Among the digestive tract diseases the biliary pathology comprises about 20-25 %. In the biliary pathology the paramount aim is the restoration of bile formation and discharge normal processes. Due to insufficient bile formation by the liver or the disturbance of its entering into the intestine resulting in the biliary insufficient thorough and sometimes long medicamentous therapy is required [3]. Nowadays there is the vast arsenal of cholagogue drugs including species on the basis of vegetative raw material.

The aim of the given studies was the structural analysis of the assortment of cholagogue drugs used in Russian Federation, the estimation of elaboration prospects of new cholagogue drugs and

the improvement of the present ones. The specific group of cholagogue drugs has been studied namely « A05A Drugs for treatment of the gallbladder diseases» (« A05AA Bile acid preparations»; « A05AB Drugs for treatment of bilifeous tract diseases»; « A05AX Other preparations for treatment of bilifeous tract diseases»), with the exception A05B group- «preparations for treatment of hepatic diseases», presented mainly by hepatoprotectors and « A05C- the combination of preparations for treatment of hepatic and bilifeous tract diseases» presented mainly by the combined phospholipids.

The situational analysis has been carried out on the basis of official sources of the information about Medical products: «The State register of medical products 2006-2009 r» [1], «The directory of synonyms JIC 2009 r» [6], Data from an electronic site « The Circulation of medical products » <http://www.regmed.ru> [4]. The period from 2006 to 2009 and then following groups of parameters have been chosen: 1) juridical (registration in the Russian Federation), 2) economic (industrial: country, suppliers); 3) pharmaceutical (medicinal forms, structure of operating substances) [2]; The general assortment of cholagogue drugs on the pharmaceutical market the Russian Federation, during the analyzed period, has comprised 37 INN, forming the group of 50 trading names (table 1).

The main portion of preparations 40 (62 %), has been registered in the Russian Federation till 1991. 11 (18 %) medicinal preparations having been registered during the period from 2001 to 2009 are relatively new pharmaceutical preparations for the Russian market. However only two polycomponental vegetative preparations (Travochol, Artecholin) may be consider really new as 9 others, having been registered under new trading names, have been known before. The most extensive group of 72 % includes herbal drugs (27 % of which are polycomponental), synthetic drugs represent 6 %. Bile- preparations i.e. biopreparations form 11 %, the given group having not been changed from 1990 s. Bile acid preparations and their salts from 11 % of the total number and their assortment renovation as it has been noted above results from registration of new trading names existing on the market INN (table 2).

The assortment structure analysis of the realization forms has revealed the absolute prevalence of solid medicinal forms 80 % (table 3). Liquid medicinal preparations form 20 % of the total assortment among which one preparation is in the form of a solution for intramuscular and intravenous injections (Chophytol). The great part (31 %) of solid medicinal preparations is presented by tablets. Liquid medicinal form is most typical for preparations of vegetative raw material and is presented in such forms as syrups, drops, liquid extracts and elixirs.

The assortment analysis concerning the industrial sign has shown that native medicinal preparations represent a greater part of medicinal products having been registered on the Russian market (69 %), 79, 5 % being herbal drugs. The imported preparations form 31%, including 55% of herbal drugs. The main part of the imported products have been registered in the forms of tablets and capsules-20 %. The prevalence of species, briquettes, filter-packets, vegetative raw material and powders - 32 % (import-0 %) in the group of native medicinal preparations is due to both high popularity of such traditional medicinal forms and absence of more modern and innovative medicinal forms of this preparations group in the industrial portfolios of Russian enterprises .

The assortment analysis concerning the geographical sign has shown the fact that 9 countries (figure 1) have registered their supplies. In accordance with the number of medical products Germany takes first place (9 %), France second place (5 %), Czechia third place (3 %).

The absence of registered products of some preparations causes some kind of worry: according to the data on 15.05.2009 (table 4) only 32 analyzed preparations (50 %) have their registered

producers, 23 medicinal preparations (leaf of sumag flowers arnica) don't have their producers, the registration of 9 preparations (14 %) has been abolished (registration time is out). [4]

Thus thanks to the analysis (figure 2) results the macrocontour of a target segment of the market shows the assortment structure of cholagogue drugs used in Russian Federation. The presented data may be of interest for the prospects of development of new native medicinal products and improvement of their forms.

Table 1

Structure of assortment cholagogue drugs,
resolved to application in the Russian Federation (2006-2009)

Group	Assortment					
	MHH		Trading names		Preparations	Share
	Quantity	%	Quantity	%	Quantity	%
1. Bilius acids and their salts	3	8	6	12	7	11
2. Bile preparations	3	8	3	6	7	11
3. Preparations of a phytogenesis Monocomponental	12	32	20	40	29	45
Polycomponental	15	41	17	34	17	27
4. Synthetic preparations	4	11	4	8	4	6
	37	100	50	100	64	100

Table 2

Dynamics of registration cholagogue drugs in the Russian Federation from 1967 to 2009

Group	1967-1991		1992-2000		2001-2006		2007-2009		TOTAL	
	Unit	%	Unit	%	Unit	%	Unit	%	Unit	%
Bilius acids and their salts	1	2	3	5	1	2	2	3	7	11
Bile preparations (From organs of animals)	6	9	1	2	0	0	0	0	7	11
Monocomponental a phytogenesis	24	37	2	3	2	3	1	2	29	45
Polycomponental a phytogenesis	5	8	7	10	5	8	0	0	17	27
Synthetic	4	6	0	0	0	0	0	0	4	6
In total	40	62	13	20	8	13	3	5	64	100

Table 3

Structure of assortment cholagogue drugs by kinds of medicinal forms

Medicinal forms	Quantity					
	Total	%	Import	%	Russia	%
Solid						
Tablets	20	31	7	11	13	20
Species (vegetative raw material)	15	23	0	0	15	23
Capsules	8	13	6	9	2	3
Granules	2	3	0	0	2	3
Briquettes (vegetative raw material)	2	3	0	0	2	3
Dragee	1	2	1	2	0	0
Powders	1	2	0	0	1	2
Extracts dry	1	2	0	0	1	2
Filter-packets	1	2	0	0	1	2
Total	51	80	14	22	37	58
Liquid						
Syrups	4	6	0	0	4	6
Drops	2	3	2	3	0	0
Elixirs	2	3	0	0	2	3
Extracts liquid	2	3	1	2	1	2
Solutions for intake	1	2	1	2	0	0
Suspensions	1	2	1	2	0	0
Solutions for injections	1	2	1	2	0	0
Total	13	20	6	9	7	11

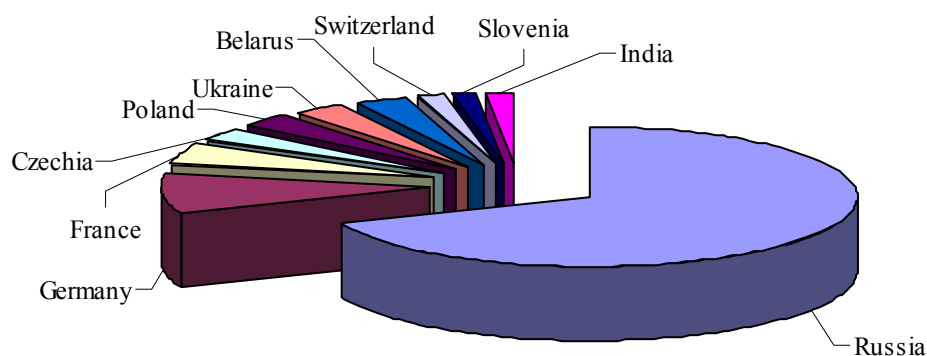


Figure 1. The assortment analysis concerning the geographical sign.

Table 4

Structure of assortment cholagogue drugs on the basis of
registration of suppliers

	Group	Suppliers are registered	Share of %	Suppliers are absent	Share of %	Registration is cancelled	Share of %	Total
1	Bilious acids and their salts	4	6	0	0	3	5	7
2	Bile preparations	5	8	2	3	0	0	7
3	Preparations of a phytogenesis							
3.1.	Monocomponental	14	22	14	22	1	2	29
3.2.	Polycomponental	8	13	4	6	5	8	17
4	Synthetic preparations	1	2	3	5	0	0	4
		32	50	23	36	9	14	64

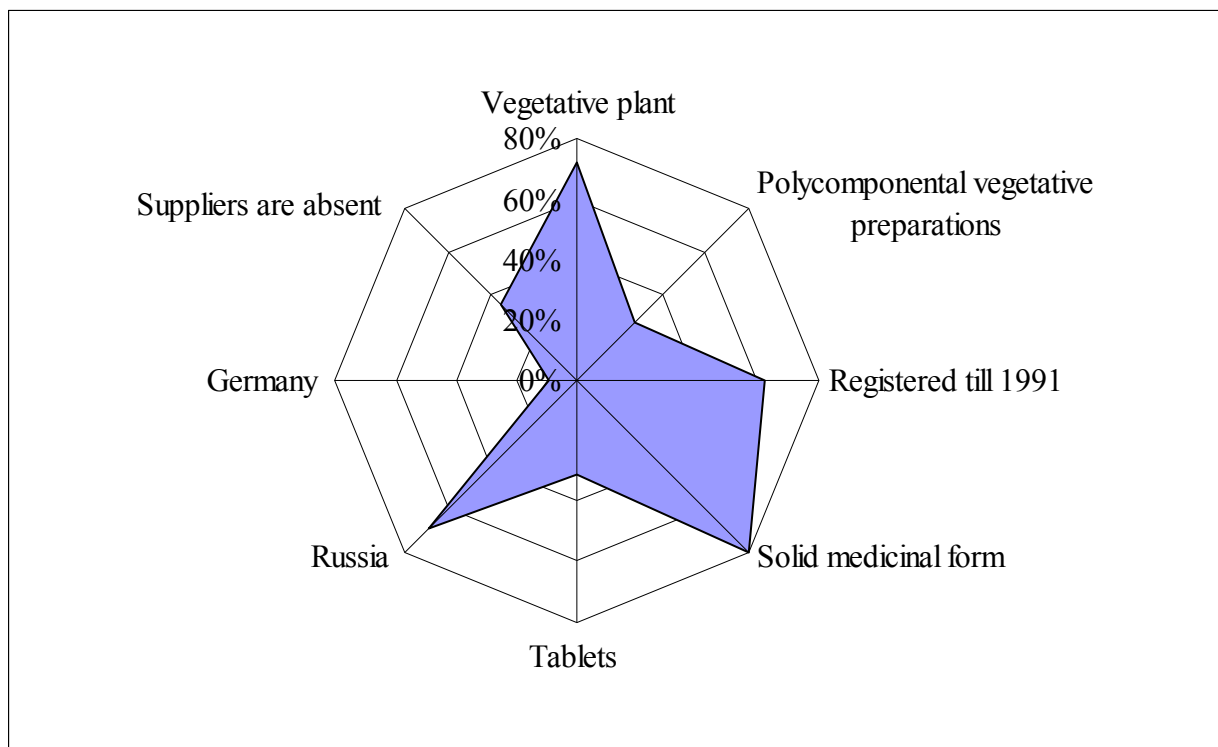


Figure 2. The macrocontour of a target segment of the market of cholagogue drugs used in Russian Federation.