

## ANALYSIS OF THE RANGE OF BILE DRUGS IN THE PHARMACEUTICAL MARKET OF THE REPUBLIC OF UZBEKISTAN

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### ABSTRACT

In this article, the drugs, medical products, medical equipment allowed to be used in the pharmaceutical market of our Republic in the State Registers of the Republic of Uzbekistan 2019/23; 2020/24; 2021/25 were studied and their bile drugs were analyzed. As a result of the analysis, the assortment of bile drugs was determined. The shares of pharmaceutical manufacturers in the production of bile drugs studied. As a result of the research, one of the urgent tasks today is the production of local drugs that replace imports with bile drugs based on medicinal substances obtained from local plant raw materials.

**KEYWORDS:** pharmaceutical market, bile drugs, pharmaceutical manufacturers, analysis.

In the republic, certain scientific results are being achieved in terms of providing guaranteed and high-quality medical care to the population, expanding the range of original drugs belonging to various therapeutic groups, and proving their compliance with international requirements.

Today, there is increasing interest in the local pharmaceutical market for bile drugs.

According to the World Health Organization, one third of the world's population suffers from liver and biliary tract diseases. In the last 10 years, there has been a clear increase in the number of biliary tract diseases among the world's population. As an example, 500,000 to 1,000,000 people are infected with pathologies of the liver and biliary tract every year in the CIS countries alone.<sup>[3]</sup>

In diseases of the biliary tract, pain, burning in the mouth, nausea, yellow skin - all these are clear signs of liver and gall bladder disorders. These diseases are treated with bile drugs. Medicines improve bile production and excretion and restore health.<sup>[1,4]</sup>

Production of new drugs based on medicinal plants for the treatment of such diseases is one of the urgent problems of today's modern medicine and pharmaceutical industry. As a solution to these problems, scientific research is being conducted to find new sources from medicinal plants in the production of drugs used for the treatment of various diseases.<sup>[5,6]</sup>

Taking into account the above, the development and implementation of drug technology for the prevention and treatment of biliary tract diseases and the analysis of their position in the pharmaceutical market are urgent.

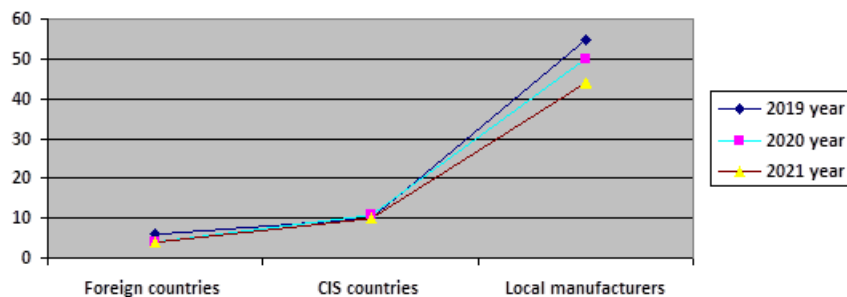
**The purpose of the research:** for the period of 2019-2021, herbal medicines registered in the State Register of Medicines and Medical Products of the Republic of Uzbekistan

- Conducting marketing research;
- Study of the pharmaceutical market of the republic;
- Analysis by producing countries;
- Study of the assortment and its indicators and content analysis of drug forms.<sup>[2]</sup>

### RESEARCH RESULTS

during the study of the 2019, 2020, 2021 analysis of the State Register of drugs, medical products and medical equipment allowed for use in medical practice (8883 for 2019, 10149 for 2020, 10673 positions for 2021) and it was determined that the share of bile drugs was 0.80% (71 drugs) for 2019, 0.64% (65 drugs) for 2020, and 0.54% (58 drugs) for 2021.

At the initial stage of the research, our republic began with the study of the share of manufacturers in the pharmaceutical market of the countries of the production of bile drugs.



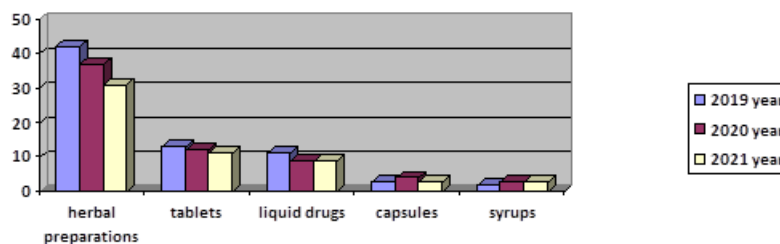
**Figure 1: Results of a comparative analysis and study of bile drugs in the pharmaceutical market of the republic in 2019-2021 according to the shares of producing countries (in number).**

It can be seen from Figure 1 that a comparative analysis of the range of bile drugs in the pharmaceutical market of the republic by the number of manufacturers shows that the main part of these drugs (compared to the total of 194 bile drugs registered in the State Register in 2019-2021) is contributed by local manufacturers (76, 8%), the second place belongs to the CIS countries (16.0%) and 7.2% of the assortment corresponds to the share of producers of foreign countries. Also, according to the results of research, it was found that the amount of drugs belonging to this pharmacological group produced by

local manufacturers from year to year is not constant in terms of assortment.

The research was focused on studying the general assortment of drugs belonging to the studied group in the pharmaceutical market of the republic.

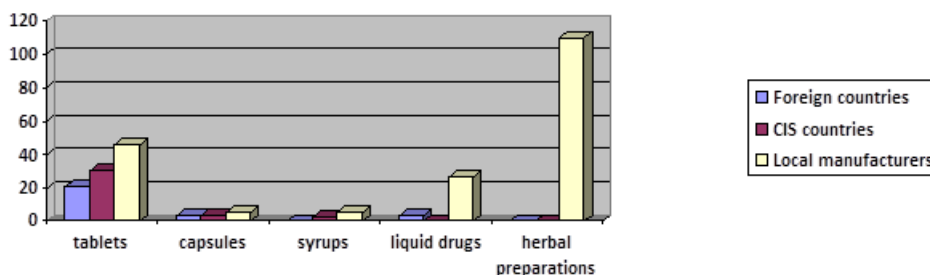
In the next stages of research, the following results were obtained when the bile drugs were divided into the forms of the drugs produced (in comparison with the total of 194 bile drugs recorded in the State Register in 2019-2021) (Fig. 2).



**Figure 2: Results of the analysis of the drug forms of bile-driving drugs on the pharmaceutical market (in number).**

According to the data presented in Figure 2, the main share of the total 194 bile drugs recorded in the State Register in 2019-2021, that is, 110 (56.7%) are herbal preparations, 36 (18.6%) are tablets, 29 (14, It was found that 9%) are liquid drugs, 11 (5.7%) capsules and 8 (4.1%) syrups.

Research was continued with a comparative study in the countries producing the assortment analysis of drugs belonging to the studied pharmacological group. Figure 3 shows the obtained results.



**Figure 3: In 2019-2021, the results of the study of the range of bile drugs in the pharmaceutical market of the republic in the share of countries.**

According to the results, it was found that herbal preparations (73.8%), which are one of the forms of medicine, are produced a lot in local pharmaceutical enterprises. But this cannot be said in the case of tablet (2%) and capsule (3.4%) drug forms. In foreign countries and the CIS countries, the production of tablets was predominant (57.1% and 80.6%, respectively). Taking into account the ease of consumption and other advantages of tablet and capsule drug forms, it is seen

that the production of these drug forms in the republic's pharmaceutical enterprises should be localized based on local medicinal plants.

During the research, an analysis of the composition and renewal index of bile drugs recorded in the State Register was carried out. The results of the analysis are presented in Figure 4 and Table 1.

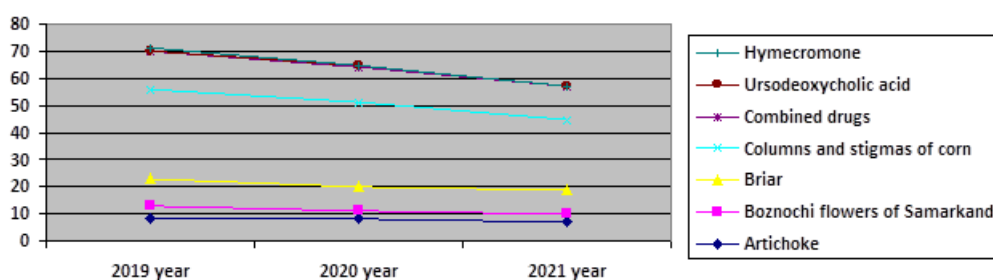


Figure 4: Analysis of the composition of bile drugs recorded in 2019-2021.

Table 1: Update index of bile drugs recorded in 2019-2021.

Total number	2019 year		Update index	2020 year		Update index	2021 year	
	number	%		number	%		number	%
			2020/2019			2021/2020		
	71	100		65	100		58	100
Combined drugs	14	19,0	-	13	20,0	-	12	20,7
Columns and stigmas of corn	33	46,4	-	31	47,7	-	26	44,8
Briars	10	14,0	-	9	13,8	1/10=0,1	10	17,2
Artichoke	8	12,3	-	8	12,3	-	7	12,1
Boznochi flowers of Samarkand	5	7,0	-	3	4,66	-	3	5,2
Ursodeoxycholic acid	-	-	-	1	1,54	-	-	-
Hymecromone	1	1,3	-	-	-	-	-	-

The analysis of medicinal products with bile effect according to the composition showed that in the local pharmaceutical market, medicinal products obtained on the basis of corn stalks and stigmas prevail (56.7%), Combined drugs - 20.1%, drugs based on briar- 14.9%, drugs based on artichoke - 11.9%, drugs based on Boznochi flowers of Samarkand - 5.7%, drugs based on Ursodeoxycholic acid - 0.52%, drugs based on Hymecromone - 0.52%.

## CONCLUSION

based on the study of the range of bile drugs registered in the State Register of the Republic of Uzbekistan in 2019-2021 (compared to the total of 194 bile drugs registered in the State Register in 2019-2021), the share of production of medicinal products by countries, drug forms and their distribution by country. It was determined by the shares, composition of drugs, their sources.

Analyzing the composition of drugs, 56.7% of bile drugs on the pharmaceutical market are herbal preparations, 18.6% are tablets, 14.9% are liquid drugs, 5.7% are capsules, and 4.1% are drugs in the form of syrup.

It was found that in local manufacturing pharmaceutical enterprises, herbal preparations (73.8%), which are one of the forms of medicine, are produced a lot, and the largest share of the composition of these medicines corresponds to herbal medicines obtained on the basis of corn stalks and stigmas (56.7%).

Taking into account the above, it is recommended to the pharmaceutical manufacturers of our republic that it is important to create and introduce the technology of new drug forms, that is, tablets, capsules and syrups based on local medicinal plants.

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