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Marketing Research of the Pharmaceutical Market of Restorative Action Drugs of the Republic of Uzbekistan

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Annotation: The analysis of the pharmaceutical market of restorative action drugs for 2019-2021 was carried out on the basis of the State Register of Medicines registered in the Republic of Uzbekistan. The structure of medicinal products by producer countries, origin, composition, and release forms has been studied. The main indicators and trends in the development of the range of medicines have been ascertained.

Key words; marketing research, vitamin D₃, calcium glycerophosphate vitamin, market assessment, State Register, restorative action drugs

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Restorative action drugs are a heterogeneous group of vitamins. Interest in the influence of vitamins and microelements on the functions of various organs and systems, including the immune system, exists constantly, since almost the entire population of the Republic of Uzbekistan experiences total multivitamin deficiency. There is no doubt that vitamin deficiency affects the state and functioning of all organs and systems of the human body without exception. [1, 6, 8]

Vitamins are irreplaceable low-molecular organic compounds with high biological activity and regulating biochemical processes in the body, they have been known for a very long time, and the understanding of their role in the functioning of various systems and organs is constantly expanding. To date, more than 20 vitamins and vitamin-like substances have been studied. There are only 13 essential vitamins, the rest are vitamin-like compounds. With very few exceptions, vitamins are not produced in the body and must come from outside. None of the currently known vitamins is able to fully replace any other. This literature review provides data on the role of two vitamins, D₃ and calcium glycerophosphate, jointly participating in the regulation of calcium metabolism, as well as other physiological and pathophysiological processes in the human body. Based on current evidence, the relationship between the level and effects of vitamin calcium glycerophosphate and vitamin D₃ is examined. [6, 7]

Calcium glycerophosphate is a regulator of calcium and phosphorus metabolism, has a restorative, tonic effect, and stimulates metabolic processes in the body.

Vitamin D₃ is the regulation of calcium-phosphorus metabolism. It enhances the absorption of calcium in the intestine and the reabsorption of phosphorus in the renal tubules, normalizes the formation of the bone skeleton and teeth in children, and helps to preserve the structure of bones. [6, 8]

Combined drug that regulates the exchange of calcium and phosphorus in the body reduces resorption and increases bone density, replenishing the lack of calcium and vitamin D₃ in the body, which is necessary for the mineralization of teeth. Calcium glycerophosphate is involved in the regulation of nerve conduction, muscle contractions, hormone production and is a component of the blood coagulation system. Adequate calcium intake is especially important during growth, pregnancy and lactation. Vitamin D₃ increases intestinal absorption of calcium.[8, 7, 10]

Marketing research in a broad sense is the collection, processing and analysis of information. Marketing research of the pharmaceutical market is an activity that involves the analysis of the market situation based on scientific methods. The primary tasks of pharmaceutical marketing are: analysis of the pharmaceutical market, identifying the characteristics of drugs and medical products as a product, specifics of supply and demand; analysis of the needs of the pharmaceutical market, forecasting its development, etc. In the block of marketing research of drugs, the main directions are the study of the assortment, calculation of its percentage, growth dynamics, analysis of the active substance, pharmacotherapeutic groups, manufacturers, etc. [2, 7]

And, as you know, marketing analysis is fundamental for determining the subject of research in the conduct of scientific work on the development of drug technology.

Considering the above, the purpose of these studies was to analyze medicinal products of the general strengthening effect of the pharmaceutical market of the Republic of Uzbekistan.

Experimental part. The object of the study is the State Register of Medicines and Medical Devices registered in the Republic of Uzbekistan for 2019 - 2021. At the same time, both domestic medicines and medicines in the CIS and foreign countries were considered. The studies used a statistical method.

Initial studies were aimed at ascertaining the proportion of drugs for use in dental practice in the context of 2019, 2020 and 2021, as well as considering the proportion of dosage forms in which the above drugs are presented. [1,3,4,5]

An analysis of the manufacturing countries of medicinal products intended primarily for use in dental practice revealed the following countries: Ukraine, USA, Norway, India, Germany, Poland, Turkey, France. The analysis data are presented in Table 1.

Table 1 Market analysis of medicines containing calcium glycerophosphate and vitamin D₃, registered in the Republic of Uzbekistan

№ s/n	Name of preparations with calcium glycerophosphate and vitamin D ₃ in the context of producer countries	Number of countries		
		Gr. № 23 – 2019	Gr. № 24 – 2020	Gr. № 25 – 2021
1.	Uzbekistan	10	3	3
CIS				
2.	Russia	2	-	1
3.	Ukraine	4	-	-
Abroad				
4	USA	6	-	-
5	Norway	3	-	1
6	Germany	-	1	-
7	India	4	2	1
8	Poland	2	-	-
9	Turkey	1	-	-
10	France	1	-	-

According to the data obtained, in the territory of the Republic of Uzbekistan in 2019, 10 medicines were registered, preparations with calcium glycerophosphate and vitamin D₃. The data showed that for 2020 and 2021 were equal to 6. At the same time, during the analyzed period, not a single drug of domestic production was registered. In the CIS countries for 2019 - 6 items, in 2020-2021 there were no registered drugs. In foreign countries in 2019 - 17 names, in 2020-2021 - 4 names of registered drugs.[4,5,6]

The results of the first stage of research indicate the absence of production in the territory of the Republic of Uzbekistan by domestic manufacturers of drugs, mainly used in drugs containing calcium glycerophosphate and vitamin D₃, as well as in an insufficient volume of drugs imported from foreign and CIS countries. However, at the same time, there was an annual increase in the share of the above drugs.[8,9]

Figure 1 shows the proportion of dosage forms of drugs for general strengthening practice. Medicines registered during the analyzed period were mainly produced in the form of chewable tablets, as well as suspensions and drops.

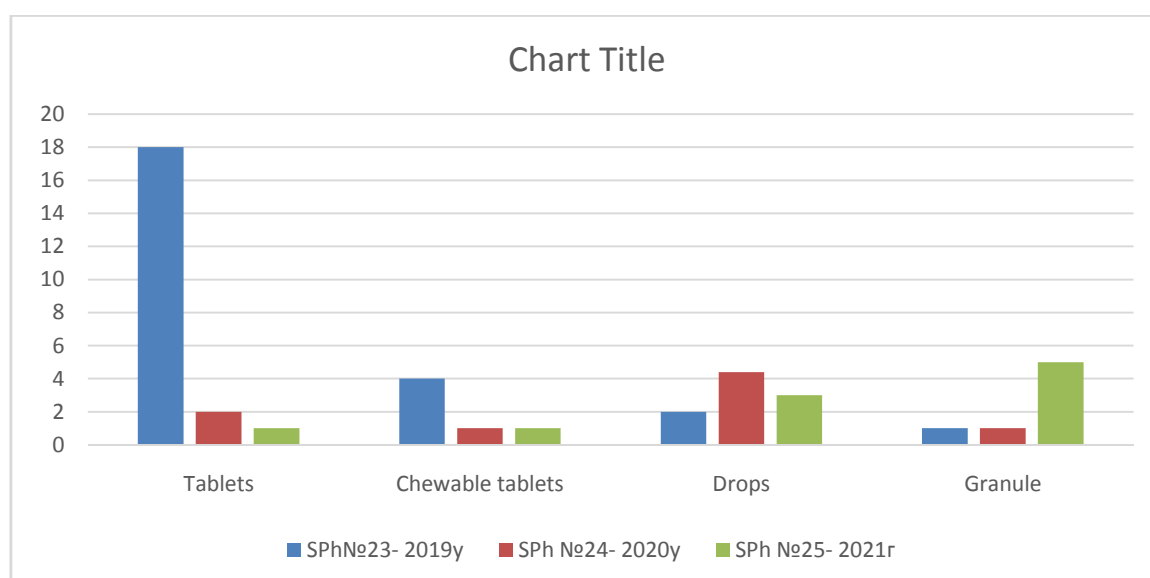


Fig. 1. Analysis of registered medicinal products containing calcium glycerophosphate and vitamin D₃ in the context of dosage forms

According to the data shown in Fig. 1, the main share of registered medicines (72.8%) is made up of tablets, an insignificant part falls on the share of chewable tablets (12.6%) and, starting from 2019, another type of dosage form appears in the State Register - drops (19.8%) and granules (34.8%). This fact indicates the limited choice of dosage forms, which presents certain difficulties for patients [10-16].

According to the results shown in Fig. 1, the bulk of registered drugs falls on the share of drugs with a synthetic active principle: in 2019 they accounted for 64.7%, in 2020 - 78.6%, in 2021 - 83.4%; The amount of calcium glycerophosphate and vitamin D₃ preparations in origin was practically the same. [2,3,4,5,6]

Conclusions. The results of the analysis indicate the lack of production of medicines for general strengthening effect by domestic enterprises. All pharmaceutical products presented in the State Register for 2019-2021 are imported from the CIS and foreign countries [17-20]. The share of drugs for this purpose in the total volume of registered drugs is no more than 0.5%. Registered drugs are presented only in 3 dosage forms: chewable tablets, as well as suspensions and drops. More than

most of the registered drugs, the active principle is represented by the substances of calcium glycerophosphate and vitamin D₃ preparations, despite their widespread use in traditional medicine, they are in the minority.

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