Рекомендована д. фармац. наук, проф. О. М. Заліською
УДК 615.1:339.138:613.292
DOI 10.11603/2312-0967.2017.4.8376

MARKETING RESEARCH OF THE MARKET OF DRUGS AND DIETARY SUPPLEMENTS USED FOR TREATMENT OF INFLAMMATORY DISEASES OF THE URINARY SYSTEM

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The aim of the work. Studying the range of drugs and dietary supplements as used for treatment of inflammatory diseases of the urinary system available in the pharmaceutical market of Ukraine. To validate expediency of a new herbal drug development to treat inflammatory diseases of the urinary system.
Materials and Methods. Generally accepted statistical and marketing research of paper and electronic sources concerning drugs of the given pharmacological group.
Results and Discussion. The article is devoted to analysis of the range of drugs and dietary supplements in the pharmaceutical market of Ukraine on the basis of medicinal herbs for the treatment of inflammatory diseases of the urinary system. The authors have analyzed the product range of pharmaceutical manufacturers of drugs and dietary supplements and compared their characteristics. They determined the basic patterns and tendencies of the pharmaceutical market development in Ukraine as regards the product portfolio policy of drugs for treatment of inflammatory diseases of kidneys.
Conclusions. The research has supported the feasibility of creating a new drug based on medicinal herb material with renoprotective effect.

Key words: herbal medicinal products; dietary supplements; pharmaceutical market of Ukraine; urinary system; inflammatory diseases of the kidneys; pyelonephritis.

Introduction. The urinary system pathology is ranked fourth among deceases of the population of Ukraine, which is 5.5 %. In the structure of chronic kidney diseases, inflammatory diseases such as pyelonephritis and glomerulonephritis prevail. [1] Anatomical and functional features of the urinary tract, as well as background diseases, often cause the chronicity, and the recurrence rate determines the progression of renal failure. The chronic kidney failure is one of the biggest challenges of the modern nephrology since it is caused by the progressive course of the chronic kidney disease [2]. Acute and chronic pyelonephritis is caused by infection with pathogenic microorganisms, therefore the main treatment method is an adequate antibiotic therapy; a sufficient treatment is 10–14 days of modern antibiotics course [3]. In addition to antibiotic therapy, herbal medicinal products are widely used, which increase the efficiency of complex treatment and do not have acute side effects; also, long-term use is possible. This is especially true for treatment of the chronic kidney disease, which is often recurrent [4].

Materials and Methods. Generally accepted statistical and marketing studies of paper and electronic sources of information on the drugs of this pharmacological group. Analyzing the range of drugs available in the domestic pharmaceutical market, authors referred to the State Medicines Register [5] and the 2017 Compendium to analyze the range of dietary supplements [6]; also, they searched through the Internet pharmacies GeoApteka [7] and Tabletki.ua [8].

Results and Discussion. Marketing research of drugs used to treat the urinary system was carried out in 2013 and 2015 by teams of authors [9, 10].

Since a large number of herbal preparations are registered as dietary supplements, we decided to analyze not only drugs but also dietary supplements in order to get comprehensive information on the situation in the market of drugs for treatment of inflammatory diseases of the urinary system. The research revealed that according to the State Medicines Register as of November 2017, 39 herbal pharmaceutical products used for the treatment of the urinary system diseases were registered on the pharmaceutical market of Ukraine. The analysis of the dietary supplements market showed that there were 110 herbal preparations registered, which are prescribed to treat and prevent deceases of the urinary system. The ratio of drugs and dietary supplements is shown in Figure 1, from which it is clear that drugs account for only ¼ of the pharmaceutical market of herbal products for the treatment of inflammatory diseases of the urinary system.

This tendency is evident because registration of medicines in Ukraine is a rather complicated procedure. Therefore, many pharmaceutical companies take the

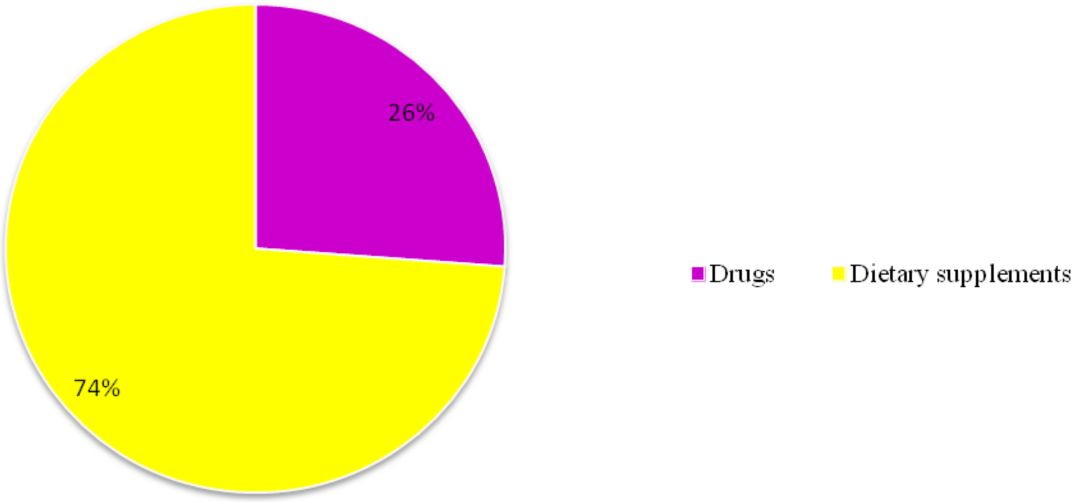

Fig. 1. Ratio of drugs and dietary supplements in the market of Ukraine

easy route and register drugs as dietary supplements, which save time and money for companies.

The first stage of our research is the analysis of the drug market, which was conducted in accordance with the State Medicines Register as of November 2017. Figure 2 depicts groups of drugs, which include herbal preparations for treatment of inflammatory diseases of the urinary system, according to ATS classification.

C03B X10 ** Other diuretics, including herbal medicines having diuretic effect

There are 12 pharmaceuticals of this sub-category in the pharmaceutical market of Ukraine, accounting for 31 % of drugs. This group comprises only medicinal products in the form of mono-component herbal drugs of domestic origin: birch buds, bearberry leaves, tinweed, Indian kidney tea and Aerva lanata. As regards manufacturers, the Viola Pharmaceutical Plant and LubnyPharm produce 3 drugs each, Liktravy – 5 products and TernoPharm 1 drug.

G04B C Medicines used to dissolve urinary calculuses

This sub-category is represented by 10 medicines, which form 26 % of the total number. The common feature is availability of multi-component drugs in the form of tablets, capsules, and pastes both of foreign and domestic origin. The domestic market is represented by such manufacturers as JSC Farmak (Uronoefron, Phytolysin plus) and the Pharmaceutical factory Zdorovya (Phytolith, Phytolit Forte N). Medicines of foreign origin are represented by Phytolysin (Poland) and Cyston (India). Also, this group includes domestic mono-preparations – Polygoni Avicularis Herba manufactured by the LubnyPharm, Liktravy and TernoPharm.

G04B D Drugs used to treat urinary urgency and involuntary

This sub-category comprises only one drug – Uroholum, which accounts for 2 % of the total. This multi-component drug of domestic origin is produced in the form of drops.

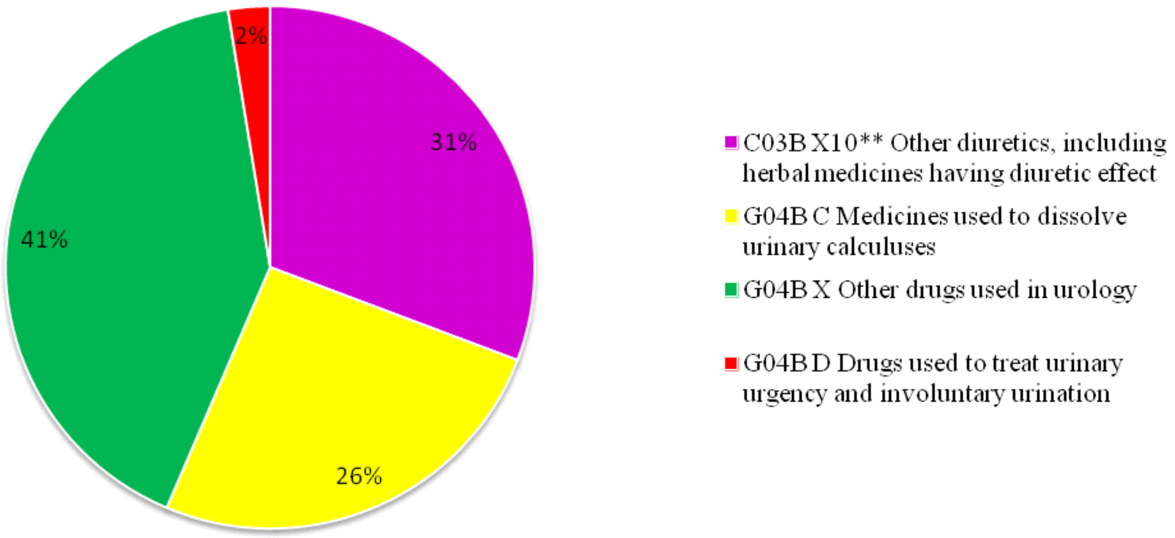

Fig. 2. Medicines on the pharmaceutical market of Ukraine

G04B X Other drugs used in urology

This sub-category consists of 16 (41 %) medicines, the main characteristic of which is the availability of multi-component foreign products: Germany – 5 drugs, 1 drug manufactured by Russia, Switzerland and Australia. Half of the range (8 titles) of this sub-category is formed by domestic products. Interesting enough is the presence of mono-preparations based on Hibisci extractum siccum in the form of 200 mg capsules (Ukraine), a solution of Cormus Lespedeza bicolor (Russia), tablets based on dry extract of Arctostaphylos uva-ursi 297 mg (Germany) and tablets based on a dry extract of Solidago virgaurea 300 mg (Germany).

The next step of the marketing research is to analyze the pharmaceutical market of dietary supplements to support the function of the urinary tract system. Figure 3 depicts groups of dietary supplements, which include herbal additives used for prevention and treatment of inflammatory diseases of the urinary system, according to the ATC classification.

10.1. Dietary supplements that improve the function of the urinary system with a diuretic effect

This group of dietary supplements comprises 55 titles, representing 36 % of drugs.

10.3 Dietary supplements to maintain function and reduce the risk of exacerbation of inflammatory diseases of the genitourinary system

This group of dietary supplements comprises 40 titles, representing 50 % of drugs.

10.5 Dietary supplements that promote dissolution and inhibit formation of ureteral stones

This group of dietary supplements comprises 15 titles, accounting for 14 % of drugs.

The next stage of research is to compare the distribution of drugs and dietary supplements per their country of origin. According to Figure 4, the pharmaceutical market of Ukraine has 10 titles of foreign drugs accounting for 26 % of the total number of products, namely: Phytolysin in the form of paste by Herbapol Poland, Cystone in the form of tablets manufactured by Himalaya India, Amazhestin in the form of tablets, Germany, Canephron N in the form of drops and tablets manufactured by Bionorica SE Germany, Solidagorin in the form of drops, Germany, Urokran in the form of tablets by Australia, Tutucon in the form of solution by Switzerland, Cystinol Acute and Cysto-Aurin in the form of tablets manufactured in Germany. Domestic products have 29 titles, representing 74 % of all medicines. Leading positions among Ukrainian producers in the segment of herbal preparations are held by Halychpharm, JSC Farmak and Pharmaceutical Company Zdorovya. The Liktravy Company holds the leadership among manufacturers of herbal products.

110 dietary supplements are available in the pharmaceutical market of Ukraine. Foreign manufacturers offer 36 titles of dietary supplements, which is 33 % of the total number. India holds the leadership (25 %), it markets 9 drugs in Ukraine; Indonesia and Italy take the second position – three dietetic supplements per country, and Latvia, Switzerland and Poland manufacture two drug each. The remaining 13 countries offer one drug each. Dietary supplements of the Ukrainian origin are represented by 74 titles.

As regards distribution of the dosage form (Figure 5), it is evident that herbal tea takes the leading position among both drugs and dietary supplements. Medicinal products in the form of tea hold a significant market share, namely 53 % of the total, while the herbal tea share in the dietary supplements is 10 % lower and amounts to 42 %. It should be noted that the pharmaceutical form – tablets holds 22 % market of drugs, and 15 % of dietary supplements. Particular attention should be given to the rate of drugs in capsules; among medicines, this dosage occupies 14 %, and

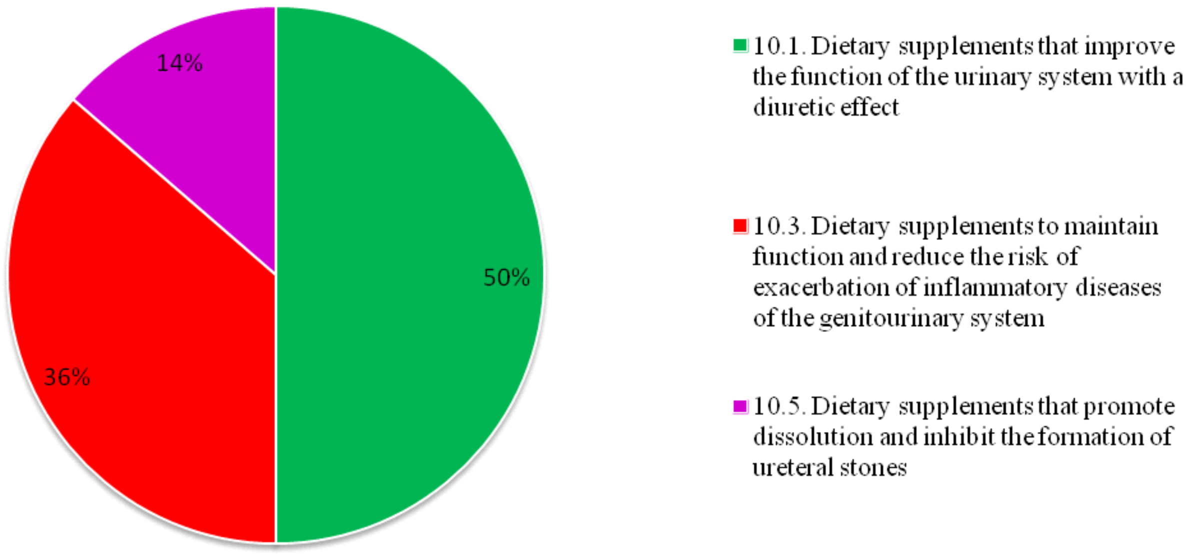

Fig. 3. Dietary supplements in the pharmaceutical market of Ukraine

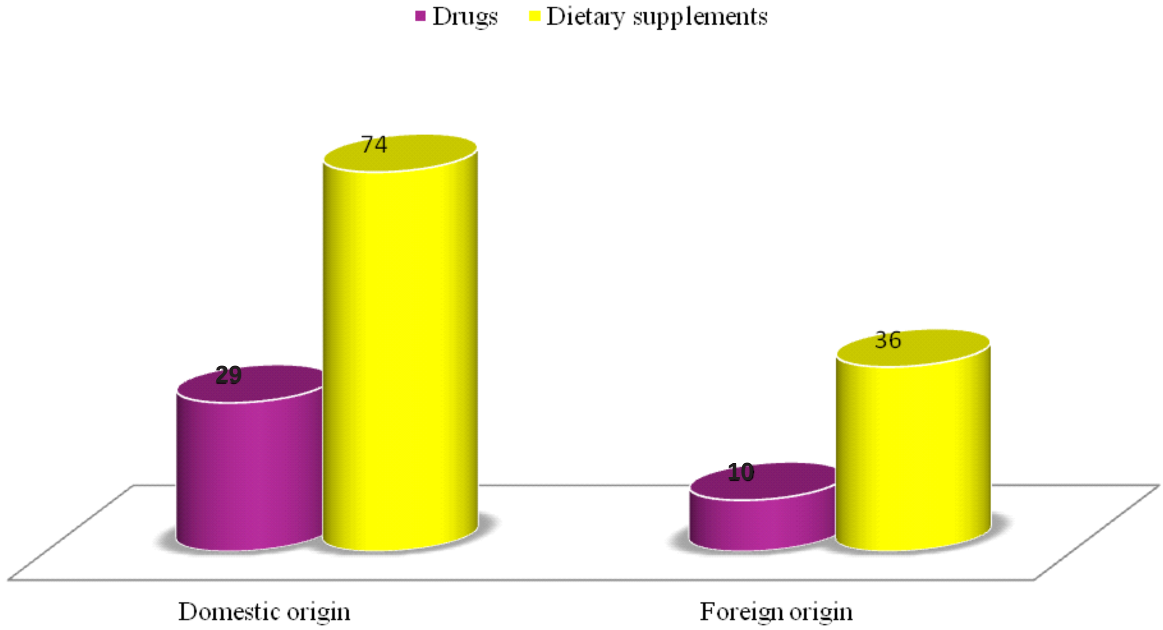

Fig. 4. Distribution of drugs and dietary supplements per origin

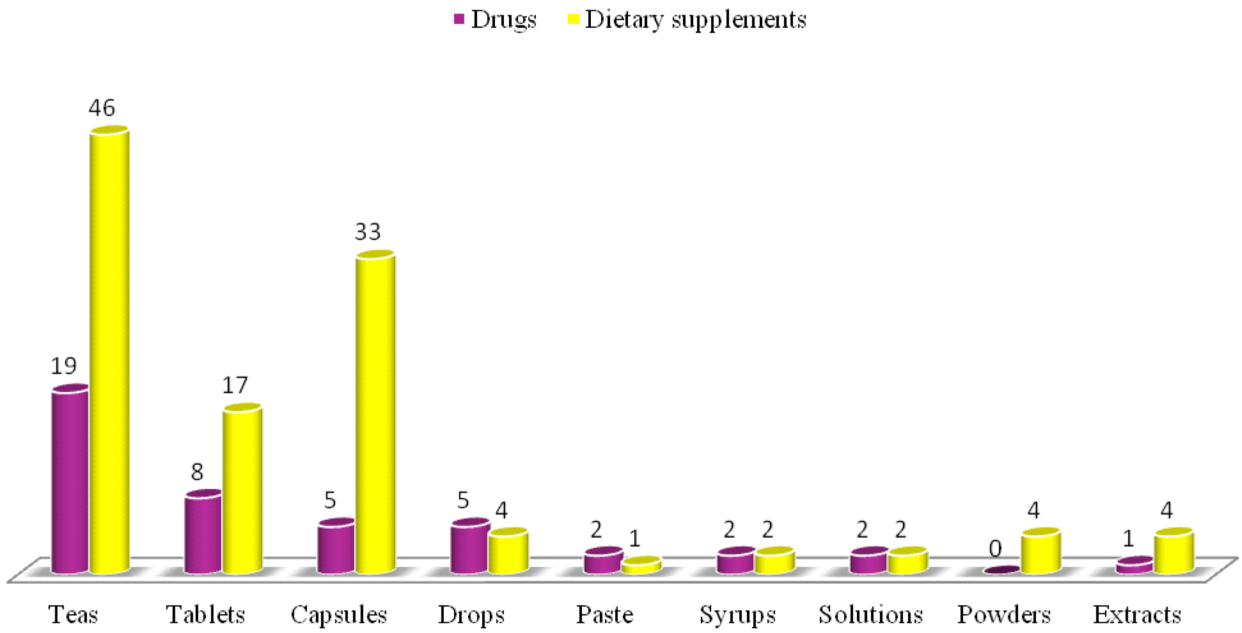

Fig. 5. Distribution of drugs and dietary supplements per dosage forms

among dietary supplements 30 %. 33 % drugs and 15 % dietary supplements are the remaining dosage forms.

Figure 6 shows that a significant share of drugs, namely 21 (58 %), is mono-preparations, 16 of which in the form of herbal tea, which is 76 % of the total number of mono-preparations. Combined drugs account for 42 %, and evenly distributed between three groups of 6, 5 and 7 drugs, respectively.

As regards dietary supplements, the number of mono-preparations is the largest with 41 titles (37 %), the group of dietary supplements containing 5–10 active substances is two positions less – 39 products (35 %). The group of herbal medicinal products containing 2–4 active substances holds 19 %, and the group consisting of supplements with more than 10 active substances – 8 %.

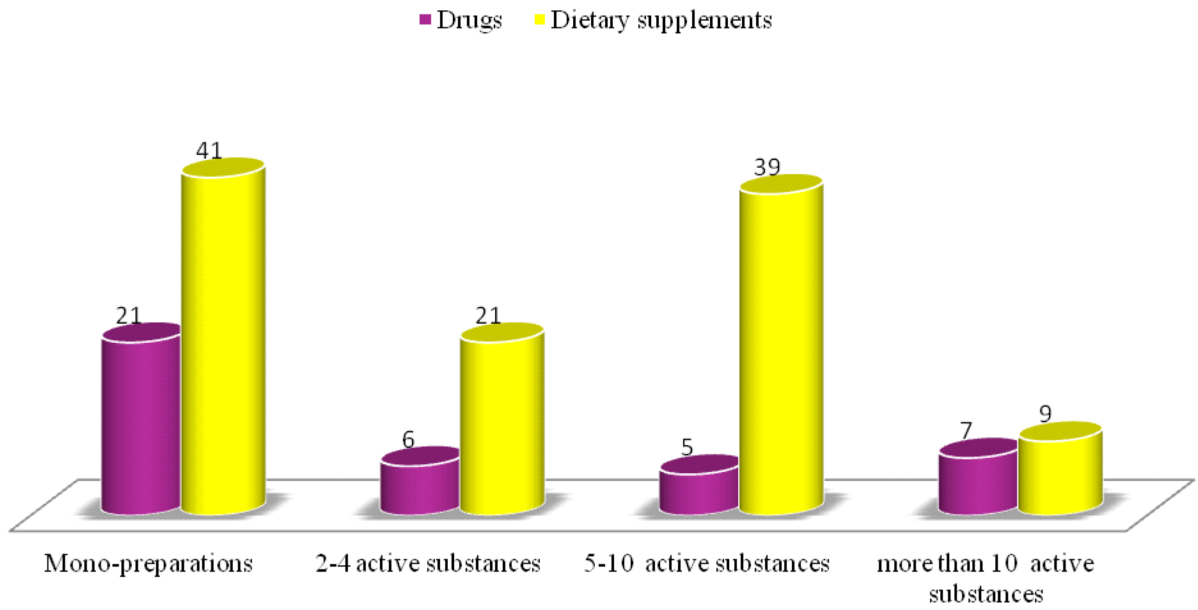

Fig. 6. Distribution of drugs and dietary supplements per the number of active substances

Conclusions. 1. A comparative analysis of drugs and dietary supplements has shown that drugs account for only ¼ of the pharmaceutical market of herbal medicinal products used to treat inflammatory diseases of the urinary system.

2. Marketing analysis showed that the mono-component tea holds the market leadership both among drugs and dietary supplements. Medicinal products in the form of tea occupy a significant market share, namely 53 % of the total, while the herbal tea share for dietary supplements is 10% lower and amounts to 42 %. This form has significant disadvantages: low efficiency, inconvenience, and inaccurate dosage. Therefore, it is expedient to develop a solid dosage form based on the herbal material.

3. Analysis of mono-component tabloids allowed us to find the most popular dosage of active substances in one tablet – 200–300 mg.

МАРКЕТИНГОВІ ДОСЛІДЖЕННЯ РИНКУ ЛІКАРСЬКИХ ЗАСОБІВ ТА ДІЄТИЧНИХ ДОБАВОК ДЛЯ ЛІКУВАННЯ ЗАПАЛЬНИХ ЗАХВОРЮВАНЬ СЕЧОВИВІДНОЇ СИСТЕМИ

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Мета роботи. Вивчити асортимент лікарських засобів та дієтичних добавок для лікування запальних захворювань сечовивідної системи, що наявні на фармацевтичному ринку України. Обґрунтувати доцільність створення нового препарату на основі рослинної сировини для лікування запальних захворювань сечовивідної системи.

Матеріали і методи. Загальноприйняті статистичні та маркетингові дослідження паперових та електронних джерел інформації щодо препаратів даної фармакологічної групи.

Результати й обговорення. Статтю присвячено аналізу асортименту лікарських засобів та дієтичних добавок фармацевтичного ринку України на основі лікарської рослинної сировини, для лікування запальних захворювань сечовивідної системи. Проаналізовано асортиментну політику фармацевтичних виробників лікарських засобів та дієтичних добавок та проведено їх порівняльну характеристику. Визначено основні закономірності та тенденції розвитку фармацевтичного ринку України щодо асортиментної політики препаратів для лікування запальних захворювань нирок.

Висновки. У результаті проведених досліджень обґрунтовано доцільність створення нового препарату на основі лікарської рослинної сировини, що володіє нефропротекторною активністю.

Ключові слова: фітопрепарати; дієтичні добавки; фармацевтичний ринок України; сечовивідна система; запальні захворювання нирок; пієлонефрит.

МАРКЕТИНГОВЫЕ ИССЛЕДОВАНИЯ РЫНКА ЛЕКАРСТВЕННЫХ СРЕДСТВ И ДИЕТИЧЕСКИХ ДОБАВОК ДЛЯ ЛЕЧЕНИЯ ВОСПАЛИТЕЛЬНЫХ ЗАБОЛЕВАНИЙ МОЧЕВЫДЕЛИТЕЛЬНОЙ СИСТЕМЫ

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Цель работы. Изучить ассортимент лекарственных средств и диетических добавок для лечения воспалительных заболеваний мочевыделительной системы на фармацевтическом рынке Украины. Обосновать целесообразность создания нового препарата на основе растительного сырья для лечения воспалительных заболеваний мочевыделительной системы.
Материалы и методы. Общепринятые статистические и маркетинговые исследования бумажных и электронных источников информации препаратов данной фармакологической группы.
Результаты и обсуждение. Статья посвящена анализу ассортимента лекарственных средств и диетических добавок фармацевтического рынка Украины на основе лекарственного растительного сырья, для лечения воспалительных заболеваний мочевыделительной системы. Проанализировано ассортиментную политику фармацевтических производителей лекарственных средств и диетических добавок и проведено их сравнительную характеристику. Определены основные закономерности и тенденции развития фармацевтического рынка Украины по ассортиментной политике препаратов для лечения воспалительных заболеваний почек.
Выводы. В результате проведенных исследований обоснована целесообразность создания нового препарата на основе лекарственного растительного сырья, обладающего нефропротекторной активностью.

Ключевые слова: фитопрепараты; диетические добавки; фармацевтический рынок Украины; мочевыделительная система; воспалительные заболевания почек; пиелонефрит.

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Отримано 11.09.2017