MARKETING ANALYSIS OF THE RANGE OF ANTI-PARASITIC DRUGS REPRESENTED ON THE PHARMACEUTICAL MARKET OF UKRAINE

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Today, the parasitic diseases are the most common in the world and occupy one of the first places in terms of prevalence and economic losses. The reasons for this situation, according to experts, are low-quality epidemiologically dangerous water and low compliance with sanitary and hygienic standards. The problem of prevention and treatment remains relevant for almost all countries, including Ukraine.

Objective - to conduct a marketing analysis of the range of the domestic pharmaceutical market of antiparasitic drugs.

Material and methods. A marketing analysis was conducted using structural, logical, graphical, systematic and content analysis of data from the State Register of Drugs.

Results. The first stage of the research was to study the range of antiparasitic drugs represented on the pharmaceutical market of Ukraine. It has been determined that in the pharmaceutical market, according to the State Register of Drugs of Ukraine, 22 names of anthelmintic drugs are registered. It has been established that the drugs, supplied to the domestic pharmaceutical market from every corner of the world, are 12 trade names, among which the leading positions in terms of supply are India and France (23% respectively). Antiparasitic drugs are presented in 3 dosage forms, among which the largest share are tablets - 65.2%, oral suspensions - 30.4%, the least in the pharmaceutical market are phytodrugs with anthelmintic activity (4.6%). The analysis of the registered antihelmintic drugs has shown that 95.6% of the study drugs are available by prescription.

Conclusions. It has been found that the largest share of drugs are benzimidazole derivatives, which account for 47.8% of the total range of the studied drugs, the most common among anthelmintic drugs are dosage forms in tablets (65.2%).

Ключові слова: helminthiasis, anthelmintic drugs, marketing analysis, phytodrugs
похідні бензимідазолу, що разом становлять 47,8% від загальної кількості досліджуваного асортименту, найпоширенішими серед антигельмінтних засобів є лікарськими формами у таблетках (65,2%).

Ключові слова: гельмінтоматози, антигельмінтні средства, маркетинговий аналіз, фитопрепараты.

Маркетингові ісследування асортимента противопаразитарних средств, представлених на фармацевтичному ринку України

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На сьогодні паразитарні заболювання є серед найбільшими розповсюдженими в світі, займають і один з перших місць по розповсюдженню і економічними потерях. Причинами цієї ситуації, згідно з експертами, є некачественна епідеміологічно опасна вода, низький рівень зобов'язання санітарно-гігієнічних норм. Проблема профілактики і лікування залишається актуальною для всіх країн, в тому числі й України.

Цель работы – провести маркетинговий аналіз асортименту отечественного фармацевтического рынка противопаразитарных средств.

Материал и методы. Проведено маркетинговое исследование с использованием структурного, логического, графического, системного и контент-анализа данных Государственного реестра лекарственных средств.

Результаты. Первым этапом исследования стало изучение ассортимента противопаразитарных лекарственных средств, представленных на отечественном фармацевтическом рынке. Проведя маркетинговое исследование, определили, что на фармацевтическом рынке, по данным Государственного реестра лекарственных средств Украины, зарегистрировано 22 наименования противопаразитарных средств. Установлено, что препараты, поступающие на отечественный фармацевтический рынок из стран мира, составляют 12 торговых наименований, среди которых лидирующие позиции по объемам поставок приходятся на ИНДИЮ и Францию (по 23% соответственно). Противопаразитарные средства представлены в трех лекарственных формах, среди которых наибольшую долю составляют таблетки – 65,2%, суспензии оральные – 30,4%, в наименьшей степени на фармацевтическом рынке представлены фитосредства с антигельминтной активностью (4,6%). Анализ зарегистрированных антигельминтных лекарственных средств показал, что 95,6% препаратов исследуемого сегмента – 22 лекарственных средства – подлежит отпуску по рецепту врача.

Выводы. Наибольшей долей представлены лекарственные средства производные бензимидазола, которые вместе составляют 47,8% от общего количества исследуемого ассортимента, наиболее распространенными среди антигельминтных средств являются лекарственные формы в таблетках (65,2%).
Material and methods

A marketing analysis was conducted using structural, logical, graphical, systemic and content analysis of data from the State Register of Drugs. The market analysis was carried out taking into account international non-proprietary names and trade names, dosage form, country and manufacturer, as well as the main pharmacological characteristics.

Results and discussion

In the parasitic diseases spread the factors, that cause infection of the population, especially the level of contamination by the soil pathogens and water parasites, are of great importance and the territory of Ukraine has favorable environmental conditions for widespread diseases of this group. Sources of invasive eggs and larvae are the environment, insects, humans, domestic and wild animals that carry large amounts of helminths [8]. During life, almost everyone in our country has suffered from an invasive disease, which in most cases is not accompanied by severe clinical symptoms. Symptoms such as tiredness, weakness, restless sleep, appetite loss, short-term abdominal pain, etc. are not associated with parasitosis in general practitioners. The patients are diagnosed late and not prescribed a special examination and do not undergo it. In many cases the cause is not identified. However, it is known that helminths and the simplest intestinal parasites today are a problem of global importance and pose a serious danger to humans, manifesting itself in the form of allergies, immunosuppression, avitaminosis, lesions of the gastrointestinal tract and other organs. In addition, as a result of the negative impact of parasite metabolites in humans, a predisposition to a wide range of diseases is formed [11]. For the timely treatment of helminth infections it is important to provide the population with effective, high quality, safe and affordable antiparasitic drugs, so our goal was to analyze the range of anthelmintic drugs in the pharmaceutical market of Ukraine.

The first stage of the research was to study the range of antiparasitic drugs on the domestic pharmaceutical market. After conducting a marketing study, it was determined that in the pharmaceutical market, according to the State Register of Drugs of Ukraine, 22 names of anthelmintic drugs were registered (Table 1).

Table 1

| № n/н | Drugs | Dosage form | ATC code | Manufacturer, country |
|-------|-------|-------------|----------|-----------------------|
| 1. | Vermox | tablets | P02C A01 | Gideon Richter AT, Romania |
| 2. | Vermox | tablets | P02C A01 | Janssen cilag, Italy |
| 3. | Albela | tablets | P02C A03 | Kusum pharm LLC, Ukraine |
| 4. | Albendazole | chewable tablets | P02C A03 | Medi Biotek Ltd, India |
| 5. | Albendazole | chewable tablets | P02C A03 | Ternopharm LLC, Ukraine |
| 6. | Aldazole | tablets | P02C A03 | JSC "Kyiv Vitamin Plant", Ukraine |
| 7. | Angelmex | chewable tablets | P02C A03 | Agropharm LLC, Ukraine |
| 8. | Vormil | chewable tablets | P02C A03 | Mili Healthcare, United Kingdom |
| 9. | Vormil | oral suspension | P02C A03 | Madras Pharmaceuticals, India |
| 10. | Zentel | tablets | P02C A03 | GlaxoSmithKline, South Africa |
| 11. | Zentel | oral suspension | P02C A03 | Farmacil, France |
| 12. | Pharmox | oral suspension | P02C A03 | "Pharmaceutical factory" DKP LLC, Ukraine |
| 13. | Piperazini adipinatum-Darnitsa | tablets | P02C B01 | PISC "Pharmaceutical firm" Darnitsa", Ukraine |
| 14. | Helminthox | tablets | P02C C01 | Innothera Chouzy, France. |
| 15. | Helminthox | oral suspension | P02C C01 | Innothera Chouzy, France. |
| 16. | Pyrantel Polpharma | oral suspension | P02C C01 | Medana Pharma Joint Stock Company, Poland |
| 17. | Pyrantel | oral suspension | P02C C01 | Kusum pharm LLC, Ukraine |
| 18. | Pyrantel | tablets | P02C C01 | Kusum healthcare PVT. LTD., India |
| 19. | Pyrantel-Vishpha | oral suspension | P02C C01 | "Pharmaceutical factory" DKP LLC, Ukraine |
| 20. | Decaris | tablets | P02C E01 | OJSC Gideon Richter, Hungary |
| 21. | Levamisole-Zdorovya | tablets | P02C E01 | Pharmaceutical company “Zdorovye” LLC, Ukraine |
| 22. | Flores Tanaceti | flowers | P02C X10** | PJSC "Liktravy", Ukraine |
The group of drugs under study, according to the component, is represented by monocomponent drugs.

The next stage of the studied range was the analysis of drugs registered in Ukraine according to the country of manufacture. According to the results of the analysis, it is established that they are supplied to the domestic pharmaceutical market from every corner of the world and make up 12 trade names, among which the leading positions in terms of supply are India and France (13.6% respectively) (Fig. 1).

Figure 1. Percentage of manufacturing facilities of anthelmintic drugs by country

In Ukraine, 22 researched drugs are sold, taking into account the dosage forms. The ratio of trade names of domestic and foreign production is 10 (45.45%) and 12 (54.55%), respectively (Fig. 2).

Figure 2. The ratio of trade names of anthelmintic drugs of domestic and foreign production

The next stage of our research was to study the range of antiparasitic drugs by dosage form. According to the results of the study, all drugs are presented in 3 dosage forms, among which the largest share are tablets - 65.2%, oral suspensions - 30.4%, the least in the pharmaceutical market are anthelmintic phytodrugs (4.6%) (Fig. 3).

Figure 3 Percentage of anthelmintics by release form
Analysis of the registered anthelmintic drugs showed that most drugs in the study segment - 22 drugs (95.6%) - are released by prescription. Over-the-counter drugs include only 1 name - Flores Tanaceti.

Thus, drugs in the pharmaceutical market for the helminth infestations treatment are mostly imported and not always economically available to the population of Ukraine. Drugs from foreign manufacturers are often quite expensive, and the majority of people are unable to buy them to treat certain diseases or maintain health at a certain level.

Conclusions
According to the results of marketing research, it was established that 15 trade names were registered in Ukraine. The ratio of the main registered subgroups of international non-proprietary names according to the ATC classification has been studied. Benzimidazole derivatives, which account for 47.8% of the total range of the drugs under study, are found to be the largest share of anthelmintic drugs. The ratio of antiparasitic drugs trade names of foreign and domestic production is 56.5% and 43.5%, respectively, which generally reflects the general market trends in the pharmaceutical market. Studies have shown that the most common dosage forms of anthelmintic drugs are tablets (65.2%).

Prospects for the further researches
Despite the wide range of drugs on the Ukrainian pharmaceutical market, the population is insufficiently provided with drugs for the parasitic diseases treatment. Therefore, it is promising to study the effectiveness of medicinal plants, phytomedicines and dietary supplements, both for the prevention and enhancement of treatment of parasitic diseases.

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