Analysis of the Range of Medicines used in the Treatment of Skin Diseases

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Authors’ contributions

This work was carried out in collaboration among all authors. Author IKA designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors EVR and DV managed the analyses of the study. Authors AK, MMA and VVG managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

The purpose of this article is to analyze the range of medicines that are used in the treatment of skin diseases. This topic is currently relevant, since the analysis of retail sales allows you to assess the financial condition of a pharmacy organization, identify unclaimed drugs, develop measures to stimulate sales, as well as study customer demand and develop a strategy for product movement. Accordingly, conducting a study of the main indicators of the assortment of this group of drugs will make it possible to expand their representation on the shelves of pharmacies, as well as to study the demand for them from potential consumers. During the analysis, the following data were obtained. The range under study was represented in

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the pharmacy by 22 items. The analysis of dosage forms of medicines intended for the treatment of skin diseases showed that liquid dosage forms accounted for 22.73%; solid dosage forms - 4.55%; soft dosage forms - 59.08%; gaseous dosage forms -13.64%. When analyzing the drugs, it was revealed that the largest number in the assortment is synthetic drugs - 68.18%; the share of phytopreparations was 31.82%. Analysis of the producing countries showed that most of the drugs presented to the pharmacy by domestic producers (54,53%), in the second place drugs manufactured in India -18,17%; third place was shared by countries: Poland, Croatia, Belgium, Germany, Czech Republic, USA -4,55%. The analysis of price categories of pharmaceuticals for the treatment of skin diseases revealed that in the price category from 100 to 200 RUB presents 22,73% of drugs; in the category from 200 to 300 rubles-49,89%; from 300 to 400 rubles from 33.73%; from 400 to 700 rubles - on 4,55%.

Keywords: Medicines; skin diseases; assortment of medicines.

1. INTRODUCTION

Drugs used for the treatment of skin diseases are in high steady demand in pharmacy organizations [1]. The reason for this is that the spread of these diseases is very dynamic due to the infectious nature of some of them, as well as due to the insufficiently unfavorable environmental background. As a result of the development of such diseases in a person since childhood, he is forced to use some drugs of this group constantly. For this reason, the availability of such medicines in pharmacies is a mandatory factor that allows improving the quality of life for those suffering from skin diseases [2,3,4]. In addition, the range of such medicines will allow patients to purchase a drug that is affordable for them at a price and quality. The purpose of the work is to analyze the range of medicines that are used in the treatment of skin diseases.

2. MATERIALS AND METHODS

The analysis was carried out on the materials of the pharmacy network "World of Medicines", which operates in Belgorod. In the process of writing the work, the calculation method, the graphical method, and the comparative method were used.

3. RESULTS

The main stage of studying the market of medicines is assortment analysis [5]. Table 1 shows the range of medicines used for the treatment of skin diseases available in the pharmacy.

As can be seen from Table 1, in the pharmacies of this network, this group of drugs is represented by 22 names.

Also, the structure of the analysis necessarily includes the study of medicinal forms of drugs [6]. We will analyze the dosage forms, medicines intended for the treatment of skin diseases (Table 2).

The analysis of dosage forms of medicines intended for the treatment of skin diseases showed that liquid dosage forms accounted for 22.73%; solid dosage forms - 4.55%; soft dosage forms - 59.08%; gaseous dosage forms -13.64%. The structure of medicines by type of dosage forms is shown in Fig. 1.

Based on Fig. 1, it can be said that the largest number of soft dosage forms are left in the structure of medicines intended for the treatment of skin diseases.

4. DISCUSSION

Medicines intended for the treatment of skin diseases can be of both synthetic and plant origin [7]. We will analyze the studied group of drugs by composition (INN) (Table 3).

Based on Table 3, it can be indicated that the range includes both synthetic and plant-based preparations.

In the literature, a structural analysis of drugs is also carried out [8] In Table 4, a structural analysis of the studied group of drugs by composition is carried out.
Table 1. The range of medicines intended for the treatment of skin diseases

| No. | Name of the medicinal product | Type of dosage form          |
|-----|-------------------------------|------------------------------|
| 1   | Abisib                        | Liquid extract               |
| 2   | Avekort                       | Ointment for external use    |
| 3   | Adolen                        | Gel for external use         |
| 4   | Alorom                        | Liniment                     |
| 5   | Ammifurin                     | Solution for external use    |
| 6   | Argosulfan                    | Cream for external use       |
| 7   | Batrafen                      | Cream for external use       |
| 8   | Berestin                      | Solution for external use    |
| 9   | Belosalic                     | Ointment for external use    |
| 10  | Bramisil                      | Pills                        |
| 11  | Hiporhamin                    | Ointment for external use    |
| 12  | Daktarin                      | Spray for external use       |
| 13  | Kalanchin                     | Liniment                     |
| 14  | Candiderm                     | Cream for external use       |
| 15  | Camadol                       | Extract [oil-based]          |
| 16  | Lomaherpan                    | Cream for external use       |
| 17  | Metrogyl                      | Gel for external use         |
| 18  | Nitrofungin                   | Solution for external use    |
| 19  | Powercort                     | Cream for external use       |
| 20  | Terbix                        | Spray for external use       |
| 21  | Cinocap                       | Aerosol for external use     |
| 22  | Erasaban                      | Cream for external use       |

Table 2. Analysis of dosage forms of medicines intended for the treatment of skin diseases

| Dosage forms          | Amount | Total | Share, % |
|-----------------------|--------|-------|----------|
|                       |        |       |          |
| 1. Liquid dosage forms|        |       |          |
| Liquid extracts       | 1      | 4,55  |          |
| Oil extracts          | 1      | 4,55  |          |
| Solution for external use | 3  | 13,64 |          |
| Total                 | 5      | 22,73 |          |
| 2. Solid dosage forms |        |       |          |
| Pills                 | 1      | 4,55  |          |
| Total                 | 1      | 4,55  |          |
| 3. Soft dosage forms  |        |       |          |
| Liniments             | 2      | 9,09  |          |
| Gels                  | 2      | 9,09  |          |
| Creams                | 6      | 27,26 |          |
| Ointments             | 3      | 13,64 |          |
| Total                 | 13     | 59,08 |          |
| 4. Gaseous dosage forms|        |       |          |
| Aerosol               | 1      | 4,55  |          |
| Spray                 | 2      | 9,09  |          |
| Total                 | 3      | 13,64 |          |
| Grand total           | 22     | 100,0 |          |
Table 3. The composition of drugs intended for the treatment of skin diseases

| No. | Name of the medicinal product | INN (International non-proprietary names) |
|-----|-------------------------------|-----------------------------------------|
| 1   | Abisib                        | Siberian fir extract (Abies sibirici extract) |
| 2   | Avekort                       | Mometasone                               |
| 3   | Adolen                        | Adapalene                                |
| 4   | Alorom                        | Aloe tree leaf juice + Calendula officinalis flower Extract + Castor beans oil + Chamomillae recutitae floridis extract + Eucalypti viminalis foliorum oleum +[Racementhol] |
| 5   | Ammifurin                     | Ammi majus fructuum furocumarines        |
| 6   | Argosulfan                    | Sulfathiazole silver                     |
| 7   | Batrafen                      | Ciclopirox                               |
| 8   | Berestin                      | Birch tar (Pix Betulae)                  |
| 9   | Belosalic                     | Betamethasone +[ Salicylic acid]         |
| 10  | Bramisil                      | Terbinafine                              |
| 11  | Hiporhamin                    | Sea buckthorn leaf extract               |
| 12  | Daktarin                      | Miconazole                               |
| 13  | Kalanchin                     | Kalanchoe                                |
| 14  | Candiderm                     | Beclometasone + Gentamicin + Clotrimazole |
| 15  | Camadol                       | Calendula officinalis flower oil + Chamomillae recutitae floridis extract |
| 16  | Lomaherpan                    | Melissae officinalis folium extract      |
| 17  | Metrogyl                      | Metronidazole                            |
| 18  | Nitrofungin                   | Chlornitrophenol                         |
| 19  | Powercort                     | Clobetasol                               |
| 20  | Terbix                        | Terbinafine                              |
| 21  | Cinocap                       | Pyrithione zinc                          |
| 22  | Erasaban                      | Docosanol                                |

Table 4. Analysis of medicinal products intended for the treatment of skin diseases by composition

| Number of names of medicines | Synthetic drugs | Herbal |
|------------------------------|-----------------|--------|
| Total                        |                 |        |
| Abs. | Share, % | Abs. | Share, % | Abs. | Share, % |
| 22   |          | 15   | 68,18    | 7    | 31,82    |
Based on Table 4, it can be said that the largest number of synthetic drugs in the assortment is 68.18%; the share of herbal products was 31.82%. The structure of the composition of drugs intended for the treatment of skin diseases is shown in Fig. 2.

In addition, the study of medicines should include an analysis of medicines in the context of the producing countries [9]. In the range of medicines intended for the treatment of skin diseases, there are drugs available, both domestic and foreign manufacturers (Table 5).

We will analyze the countries of manufacturers of medicines used for the treatment of skin diseases in Table 6.

![Fig. 2. Structure of medicinal products intended for the treatment of skin diseases by composition](image)

**Table 5. Countries that produce medicines intended for the treatment of skin diseases in the assortment of pharmacies of the “World of Medicines” chain**

| No. | Name of the medicinal product | Producing country |
|-----|-------------------------------|-------------------|
| 1   | Abisib                        | Russia            |
| 2   | Avekort                       | Russia            |
| 3   | Adolen                        | Russia            |
| 4   | Alorom                        | Russia            |
| 5   | Ammifurin                     | Poland            |
| 6   | Argosulfan                    | India             |
| 7   | Batrafen                      | Russia            |
| 8   | Berestin                      | Russia            |
| 9   | Belosalic                     | Croatia           |
| 10  | Bramisol                      | Russia            |
| 11  | Hiporhamin                    | Russia            |
| 12  | Daktarin                      | Belgium           |
| 13  | Kalanchin                     | Russia            |
| 14  | Candiderm                     | India             |
| 15  | Camadol                       | Russia            |
| 16  | Lomaherpan                    | Germany           |
| 17  | Metrogyl                      | India             |
| 18  | Nitrofungin                   | Czech Republic    |
| 19  | Powercort                     | India             |
| 20  | Terbix                        | Russia            |
| 21  | Cinocap                       | Russia            |
| 22  | Erasaban                      | USA               |
Table 6. Analysis of the countries of manufacturers of medicines used in the treatment of skin diseases

| No. | Producing country | The amount of products | The ranking of countries |
|-----|------------------|------------------------|-------------------------|
| 1   | Poland           | 1                      | 3                       |
| 2   | Russia           | 12                     | 1                       |
| 3   | India            | 4                      | 2                       |
| 4   | Croatia          | 1                      | 3                       |
| 5   | Belgium          | 1                      | 3                       |
| 6   | Germany          | 1                      | 3                       |
| 7   | Czech Republic   | 1                      | 3                       |
| 8   | USA              | 1                      | 3                       |
|     | **Total**        | **22**                 | **100**                 | -                       |

Fig. 3. Structure of countries producing medicines intended for the treatment of skin diseases

Table 7. Prices for medicines for the treatment of skin diseases in the network of pharmacies "World of medicines" (Belgorod)

| No. | Name of the medicinal product | Price |
|-----|--------------------------------|-------|
| 1   | Abisib                         | 122,0 |
| 2   | Avekort                        | 210,0 |
| 3   | Adolen                         | 560,0 |
| 4   | Alorom                         | 320,0 |
| 5   | Ammifurin                      | 670,0 |
| 6   | Argosulfan                     | 260,0 |
| 7   | Batrafen                       | 296,0 |
| 8   | Berestin                       | 95,0  |
| 9   | Belosalic                      | 360,0 |
| 10  | Bramisol                       | 197,0 |
| 11  | Hiporhamin                     | 156,0 |
| 12  | Daktarin                       | 540,0 |
| 13  | Kalanchin                      | 395,0 |
| 14  | Candiderm                      | 371,0 |
| 15  | Camadol                        | 264,0 |
| 16  | Lomaherpan                     | 239,0 |
| 17  | Metrogyl                       | 142,0 |
| 18  | Nitrofungin                    | 231,0 |
| 19  | Powercort                      | 204,0 |
| 20  | Terbix                         | 224,0 |
| 21  | Cinocap                        | 291,0 |
| 22  | Erasaban                       | 342,0 |
Table 8. Analysis of price categories of medicines intended for the treatment of skin diseases

| No. | Price category       | Amount | Share, % |
|-----|----------------------|--------|----------|
| 1   | From 100 to 200 rubles | 5      | 22.73    |
| 2   | From 200 to 300 rubles | 9      | 40.89    |
| 3   | From 300 to 400 rubles | 5      | 33.73    |
| 4   | From 400 to 500 rubles | 1      | 4.55     |
| 5   | From 500 to 600 rubles | 1      | 4.55     |
| 6   | From 600 to 700 rubles | 1      | 4.55     |
| Total|                      | 22     | 100.0    |

Fig. 4. Structure of price categories of medicines intended for the treatment of skin diseases

The analysis of price categories of pharmaceuticals for the treatment of skin diseases revealed that in the price category from 100 to 200 RUB presents 22.73% of drugs; in the category from 200 to 300 rubles - 49.89%; from 300 to 400 rubles from 33.73%; from 400 to 700 rubles - on 4.55%.

5. CONCLUSION

During the analysis, the following data were obtained. The range under study is represented in the pharmacy by 22 items. The analysis of dosage forms of medicines intended for the treatment of skin diseases showed that liquid dosage forms accounted for 22.73%; solid dosage forms -4.55%; soft dosage forms- 59.08%; gaseous dosage forms -13.64%. When analyzing the drugs, it was revealed that the largest number of synthetic drugs in the assortment is 68.18%; the share of herbal drugs was 31.82%. Analysis of the producing countries showed that most of the drugs presented to the pharmacy by domestic producers (54.53%), in the second place drugs manufactured in India -18.17%; third place was shared by countries:
Poland, Croatia, Belgium, Germany, Czech Republic, USA -4.55%. The analysis of price categories of pharmaceuticals for the treatment of skin diseases revealed that in the price category from 100 to 200 RUB presents 22.73% of drugs; in the category from 200 to 300 rubles - 49.89%; from 300 to 400 rubles from 33.73%; from 400 to 700 rubles - on 4.55%.

DISCLAIMER

The products used for this research are commonly and predominantly used products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation, but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

CONSENT

It's not applicable.

ETHICAL APPROVAL

It's not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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