



Research Article

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Market research D06B B antiviral drugs: A rational approach to the treatment of herpes-virus infections

I. V. Bondarieva, V. V. Malyi, O. Yu. Rogulia and I. V. Timanyuk

Pharmaceutical Marketing and Management Department, National University of Pharmacy, Kharkiv, Ukraine

ABSTRACT

In the paper the significance of immune and etiotropic treatment of herpes-virus infections is presented, data have been generalized particularities of herpes simplex virus type 1 and type 2; the principal active ingredients, company-manufacturers and country-manufacturers of antiviral drugs have been analyzed; a comparative analysis of sales of antiviral drugs in packages and dollars for 2013 and 2014 in Ukraine has been conducted; the leading antiviral drugs on sales in packages and in dollars have been determined.

Key words: antiviral drugs, herpes-virus infections, immune and etiotropic treatment

INTRODUCTION

According to WHO, the incidence of herpes simplex virus ranks second place among the most common viral infection on the planet. In the first place, experts attributed the influenza virus. About Herpes has been known 2,000 years ago, the symptoms of it were studied by Hippocrates. From 90 to 98% of the world population are affected by the virus. In the EU, the USA, Canada, the carriers of infection are from 30 to 50% of the population, and in the countries of third world – from 80 to 90%, and in 50% of cases, the disease recurs at least once a year, as strong immunity to the virus does not exist.

Over the last 10 years, a surge of herpes infection with a similar situation is observed in Ukraine. It should be noted that the lower the level of society, the more people suffer from labialis herpes. For example, in developing countries, almost 100% of the population is ill with herpes type 1, and developed – not more than 50%.

As at the time of acute herpes becomes very contagious, the number of patients can seriously increase. Therefore, one of the most pressing problems in the treatment of herpes is to reduce the period of its recurrence. This can be achieved in the event that block DNA virus and stop its reproduction.

Therefore, the infection should be treated not only a modern and efficient means, but also to observe all safety measures during an exacerbation, or is likely to infect relatives.

EXPERIMENTAL SECTION

Currently 8 types of herpes virus are known. The most widespread in Ukraine, as well as throughout the world, are herpes simplex virus type 1 (HSV-1), striking facial skin, lips and mucous membranes of the mouth and herpes simplex virus type 2 (HSV-2), which affects the genitals, infection occurs through sexual intercourse [2-6].

The features of the HSV infection becoming infected in childhood, long latency for "lifelong" latent proliferation of HSV in the lymph nodes and the ganglia of the nervous system. In this regard, the immune status deteriorates joins

related infection (chlamydia, fungal, bacterial), which leads to the development of chronic inflammatory disease recurrence of herpes infection, poor quality of life.

Thus, the main objectives in the treatment of recurrent HSV infection are:

- relief of recurrence in the short term;
- reduce the time of re-epithelialization;
- relapse prevention and reducing their frequency and severity;
- prevention of transmission.

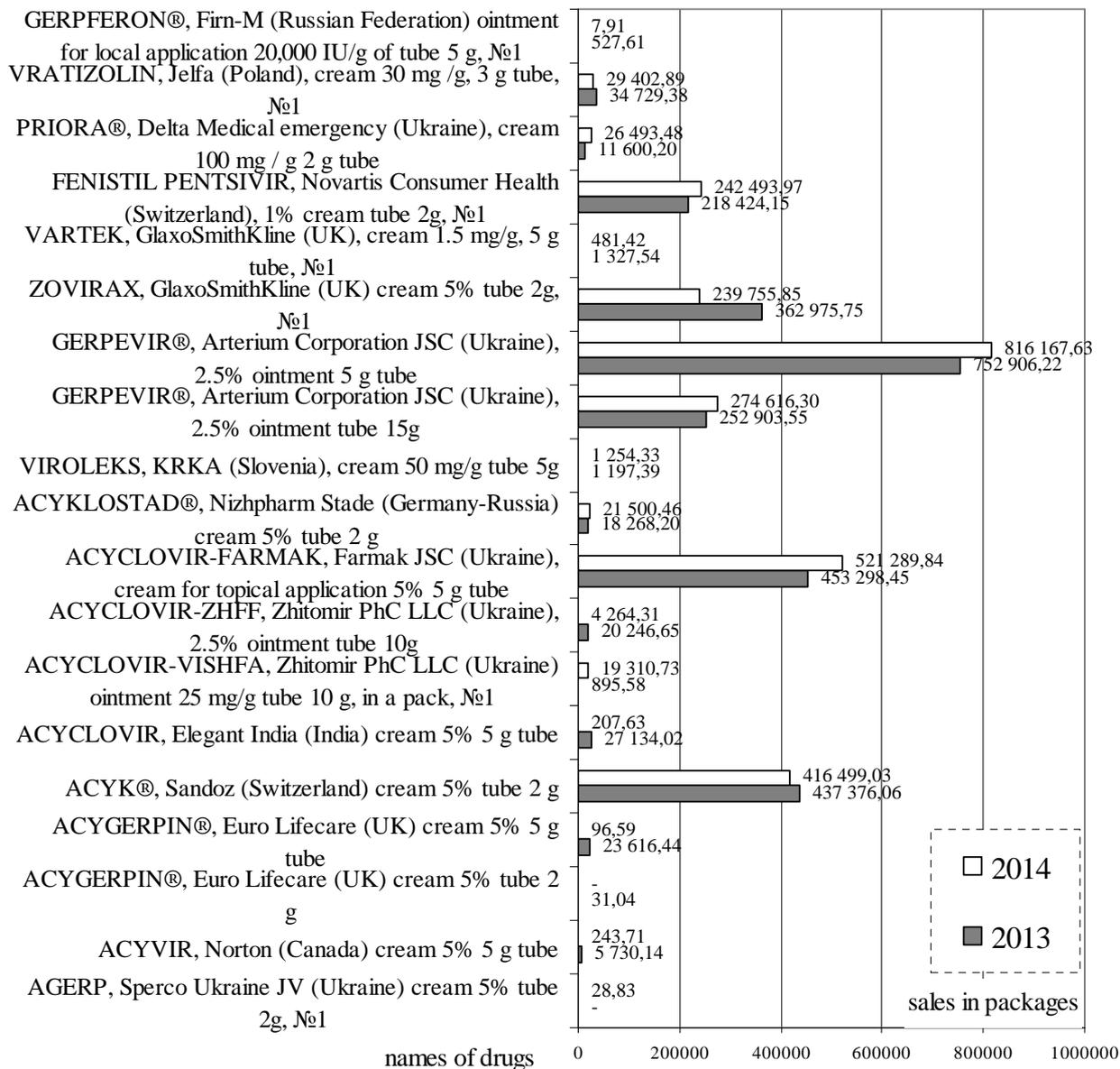


Fig.1. Comparative analysis of retail sales D06 B antiviral drugs in packages in 2013 and 2014 years

We have found, according to the results of comparative analysis of retail sales D06 B antiviral drugs in USD in 2013 and 2014 years, that the leaders of sales in dollars are drugs: GERPEVIR®, Arterium Corporation JSC (Ukraine), 2.5% ointment 5 g tube, ACYK®, Sandoz (Switzerland) cream 5% tube 2 g, FENISTIL PENTSIVIR, Novartis Consumer Health (Switzerland), 1% cream tube 2g, №1, ZOVIRAX, GlaxoSmithKline (UK) cream 5% tube 2g, №1, according to their sales in dollars in 2013 totaled 1.813 billion dollars, and in 2014 – 1.833 billion dollars (Fig. 2).

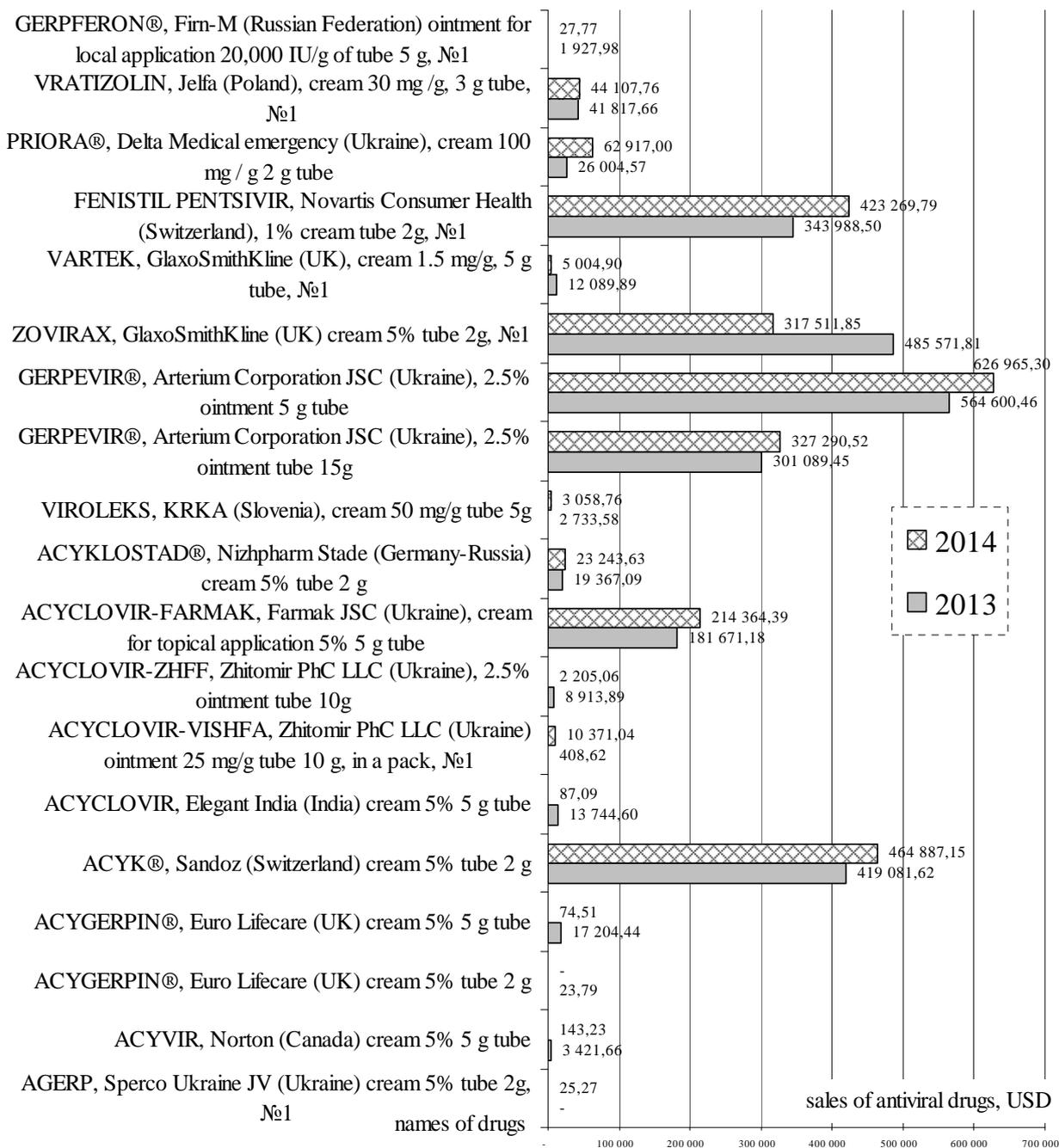


Fig.2. Comparative analysis of retail sales D06 B antiviral drugs in USD in 2013 and 2014 years

There are two priority areas for treatment of HSV are immune and etiologic. Both of them are pathogenetic substantiation. The first is based on restoring control over the immune system latent HSV in the ganglia of the central nervous system. The second is based on infringement of replication and activation of the pathogen in the event of proviral virus from the immune control. Immune therapy focus, that is, taking into account the pathogenesis of infection is considered to be the most natural method of preventing HSV. This is in principle possible to control the formation and the level of tension antiherpetic acquired immunity. At the same time specific antiherpetic immunodeficiency diagnosed in patients with recurrent herpes viral diseases usually limits immunostimulatory effects of immunomodulators. Therefore influence the defective immune system of patients with recurrent herpes viral infections is extremely difficult.

Etiotropic drugs are the most effective in relieving the clinical manifestations of infection. Today, there are quite a large arsenal of tools antiherpetic medicines. Currently, the most developed and practical importance is the method of chemotherapy antiherpetic acyclic nucleosides or cyclovirs. This is because during reproduction of herpes viruses to create a new generation of "young" virions starts with the synthesis of viral subsidiaries DNA, and wherein the

DNA synthesized exclusively from the nucleoside located in the infected cell. Cyclovirs used for both external and oral and parenteral treatment of herpetic lesions. Usually the treatment of herpes simplex begins with topical medicines, the effectiveness of the therapy, the higher the earlier it is started. Outside the appointment of antivirals herpes skin and mucous membranes is necessary to reduce the severity of clinical manifestations in the lesion, accelerating epithelization and reducing the duration of viral shedding from the hearth. Therefore, problem of topical treatment of HSV was solved with the advent of antiviral drugs in the form of a cream [1, 7-10].

During our research it was found that on the pharmaceutical market of Ukraine presented antiviral drugs for external use on the basis of acyclovir, podophyllotoxin, penciclovir, docosanol, denotivira at a concentration of 2,5% and 5% different country-manufacturers and different company-manufacturers: Sperco Ukraine JV (Ukraine), Themis Medicare (India), Agio Pharmaceuticals (India), Salutas Pharma (Germany), Elegant India (India), Zhytomyr PhC LLC (Ukraine), Farmak JSC (Ukraine), Stada (Germany), KRKA (Slovenia), Kyivmedpreparat JSC (Ukraine), Glaxo Operations UK (United Kingdom), Stiefel Laboratories (Ireland), Novartis Pharma Production (Germany), Fleet Lab. (United Kingdom), Jelfa (Poland), Firm-M (Russian Federation). The maximum concentration of the active ingredient in the formulation makes it easier to stop the replication of the herpes virus.

In the study, a comparative analysis of sales of antiviral drugs in packages and in dollars for 2013 and 2014 in Ukraine was conducted (fig. 1 and fig. 2). Thus comparative analysis of retail sales of D06 B antiviral drugs in packages in 2013 and 2014 years shows that the leaders in sales packages are drugs: GERPEVIR®, Arterium Corporation JSC (Ukraine), 2.5% ointment 5 g tube; ACYCLOVIR-FARMAK, Farmak JSC (Ukraine), cream for topical application 5% 5 g tube; ACYK®, Sandoz (Switzerland) cream 5% tube 2 g, respectively, of their sales in packages in 2013 were 1643581, and in 2014 – 1753957 (fig. 1).

RESULTS AND DISCUSSION

Thus, it was set by us that the leading antiviral drug on sales in packages and in dollars is GERPEVIR®, Arterium Corporation JSC (Ukraine), 2.5% ointment 5 g tube, it sales in packages in 2013 were 752906, and in 2014 – 816168; and drug sales in dollars in 2013 were 564601 dollars, and in 2014 – 626965 dollars.

CONCLUSION

1. Thus, the rational approaches to the immune and etiotropic treatment of herpes-virus infections have been highlighted.
2. Marketing research of antiviral drugs in the pharmaceutical market of Ukraine has been conducted. The principal active ingredients, company-manufacturers and country-manufacturers of antiviral drugs have been analyzed.
3. A comparative analysis of sales of antiviral drugs in packages and dollars for 2013 and 2014 in Ukraine has been conducted. The leading antiviral drugs on sales in packages and in dollars have been determined.

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