

Marketing analysis of levocarnitine and glucosamine preparations

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Abstract

Aim: For the problem of the struggle of the human body with extreme strains, it is advisable to use active pharmaceutical ingredients that would directly participate in the metabolism having an actoprotective effect without exhausting the body. Levocarnitine and glucosamine have such properties. In this work was studied the development of the pharmaceutical market of Ukraine and the definition of market needs for combined and monopreparations of levocarnitine and glucosamine. **Materials and Methods:** The analysis of the market from January 2015 to September 2017 showed a significant increase in the sales of glucosamine hydrochloride and levocarnitine products, both in natural and monetary equivalents. Thus, the analysis of the data proves that the anabolic and frigoprotective properties of glucosamine have not received enough attention. The statistical data suggest that there is a growing market demand for levocarnitine for oral administration. **Results:** The ratio of the sales of glucosamine hydrochloride for injections and for oral use began to change when one of the Ukrainian drug manufacturers came out on the market with generic glucosamine hydrochloride for oral use. The changes in the price of one dose of glucosamine hydrochloride for oral use are due to the growth of the market share occupied by Ukrainian producers in this segment too. Such a shift in sales toward Ukrainian drugs contributes to the overall increase in the availability of drugs. **Conclusions:** Analysis of Ukrainian market of the glucosamine and levocarnitine preparations showed uneven distribution of foreign and domestic manufacturers.

Key words: Glucosamine hydrochloride, levocarnitine, market analysis, monopreparations

INTRODUCTION

The problem of the struggle of the human body with extreme strains that ever occur in the way of the person is still relevant nowadays. Meanwhile in Ukraine, ATC group A14B "nonsteroidal anabolic drugs for system use" contains only two registered international non-proprietary names of medicinal substances.^[1,2] Those drugs increase resistance to of a certain part of the body to strain when applied but may have side effects elsewhere. It is advisable to use active pharmaceutical ingredients that would directly participate in the metabolism and would have an actoprotective effect without exhausting the body and without significant side effects.^[3] Levocarnitine and glucosamine have such properties. Their combination can be used in traumatology to improve the working capacity of people with inflammatory diseases of the joints and also can be widely used in the production of functional foods for people with high physical and psychoemotional

loads, particularly for athletes.^[4-7] Existing research on the use of levocarnitine demonstrates its effect on increased load tolerance, as well as anabolic, cardioprotective, and antianemic effects.^[5,6,8] According to various literary sources, levocarnitine is classified into the groups of actoprotectors, antihypoxants, or non-steroidal anabolic drugs.^[5-8] Glucosamine is widely used for the treatment of arthrosis and osteoarthritis, while recent studies demonstrate its anti-inflammatory, anabolic, and frigoprotective activity.^[4,9] The purpose of this work was to study the development of the pharmaceutical market of Ukraine for preparations of levocarnitine and glucosamine, as well as the definition of market needs for combined and monopreparations with the indicated active pharmaceutical ingredients.

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